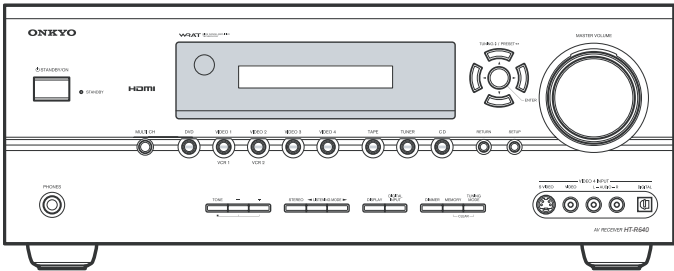


ONKYO SERVICE MANUAL

AV RECEIVER

MODEL HT-R640



RC-668M(MDD)
RC-669M(MPP)

HT-R640 Black, Silver models

B MDD	120V AC, 60Hz
S MPP	230-240V AC, 50Hz

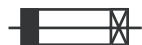
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

SERVICE PROCEDURE

1. Replacing the fuses



This symbol located near the fuse indicates that the fuse used is show operating type, For continued protection against fire hazard, replace with same type fuse, For fuse rating, refer to the marking adjacent to the symbol.



Ce symbole indique que le fusible utilise est e lent. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce demier est indique la qu le present symbol est apposse.

<Notes>

<DD> : HT-R640 USA model

<PP> : HT-R640 European model

REF NO.	PART NAME	DESCRIPTION	PART NO.	REMARKS
F901	FUSE	10A-UL/T-233	252330GR	!, <DD>
F901 or	FUSE	10A-T/UL-ST2	252333GR	!, <DD>
F901	FUSE	5A-SE-EAK	252078GR	!, <PP>
F901 or	FUSE	5A-SE-TL250V	252278GR	!, <PP>
F903	FUSE	5A-UL/T-233	252326GR	!, <DD>
F903 or	FUSE	5A-T/UL-ST2	252258GR	!, <DD>
F903	FUSE	2.5A-SE-EAK	252075GR	!, <PP>
F903 or	FUSE	2.5A-SE-TL250V	252275GR	!, <PP>
F910	FUSE	5A-UL/T-233	252326GR	!
F910 or	FUSE	5A-T/UL-ST2	252258GR	!
F6901	FUSE	12A-TUL-250V	252301GR	!
F6902	FUSE	12A-TUL-250V	252301GR	!

2. To initialize the unit

1. Press and hold down the VIDEO 1/VCR 1 button, then press the STANDBY/ON button when the unit is Power on.
2. After " *Clear* " is displayed, the preset memory and each mode stored in the memory are initialized and will return to the factory settings.

3. To check the version of microprocessor

Main microprocessor Q701 only.

1. Press and hold down the DISPLAY button , then press the STANDBY/ON button when the unit is Power on.
The version is displayed on FL display for 3 seconds.

Ex.

Main1.01/05305A

2. Press the STANDBY/ON button to Power off.

4. Memory Backup

The AV receiver uses a battery-less memory backup system in order to retain radio presets and other settings when it's unplugged or in the case of a power failure.

Although no batteries are required, the AV receiver must be plugged into an AC outlet in order to charge the backup system. Once it has been charged, the AV receiver will retain the settings for several weeks, although this depends on the environment and will be shorter in humid climates.

OPERATION CHECK-1

SPEAKER PROTECT-1 (DC VOLTAGE DETECTION)

[When]

1. Exchange power transistors (Q6050 - Q6054, Q6060 - Q6064).
2. Exchange amplifier PC board ass'y (NAAF-8911).

[Procedure]

<Note>

No load. No input.

1. Press and hold down the CD button, then press the STANDBY/ON button while the unit is Power ON.
"Test - _" is displayed only for 5 seconds.

Test -  Blinks

2. Press the VIDEO 3 button, while the characters of "Test - _" are displayed.

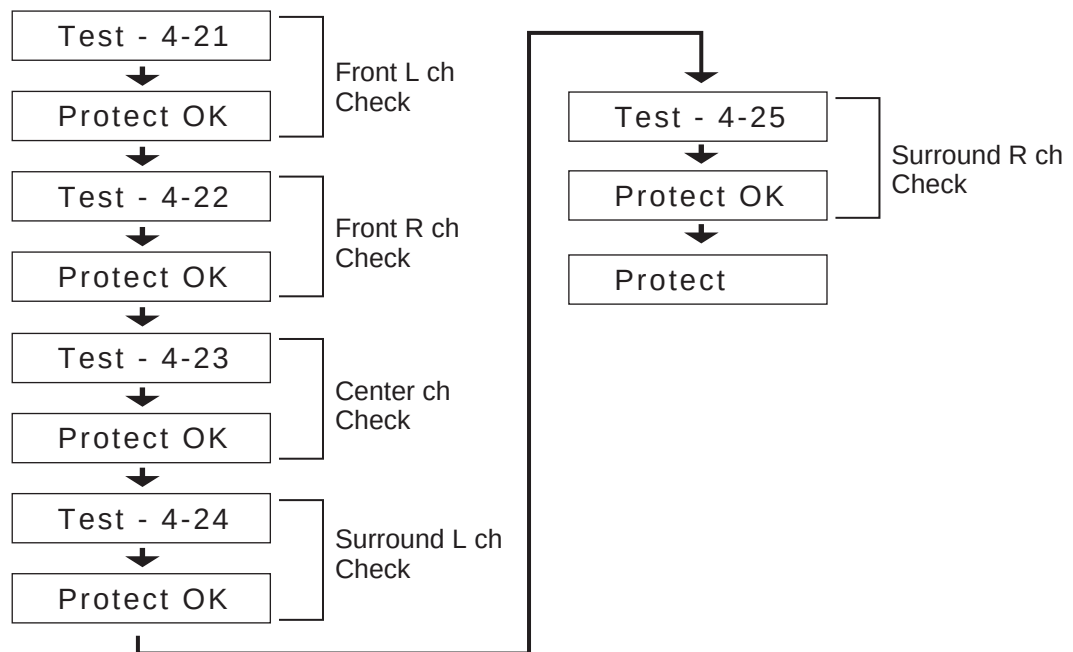
The unit will be in the state of "Test-4-00".

Test - 4-00

3. Repeatedly press TONE+ button until the characters of "Test-4-21" are displayed.

Test - 4-21

Check whether the operation starts and continues automatically as follows.



If all channels are OK, the characters of "Test - 4 - 35" are displayed.

Test - 4-35

4. Press the STANDBY/ON button.



OPERATION CHECK-2

SPEAKER PROTECT-2 (CURRENT DETECTION)

[When]

1. Exchange power transistors (Q6050 - Q6054 Q6060 - Q6064.
2. Exchange amplifier PC board ass'y (NAAF-8911).

[Procedure]

<Note>

No input.

Do not check two or more channels at the same time.

Do not connect a dummy load to speaker terminal longer than 2 seconds.

1. Press and hold down the CD button, then press the STANDBY/ON button while the unit is Power ON.
" Test - _ " is displayed only for 5 seconds.

Test -  Blinks

2. Press the VIDEO 3 button, while " Test - _ " is displayed.
The unit will be in the state of " Test-4-00".

Test - 4-00

3. Repeatedly press TONE + button until " Test-4-35 " is displayed.

Test - 4-35

4. Connect the dummy load of 3 ohms to the Front L ch speaker terminal.
At this time, confirm that the speaker relay is not turned off.

Test - 4-35

5. Connect the dummy load of 1 ohm to the Front L ch speaker terminal.
At this time, confirm that the speaker relay is turned off and " Protect " is displayed.

Protect

Disconnect the dummy load immediately after checking the display of " Protect ".

Test - 4-35

6. Check other channels according to the same procedure as 4 and 5.

7. Press the STANDBY/ON button.

Clear →  Turn off

OPERATION CHECK-3

CONTROL OF POWER SUPPLY (OUTPUT SENSOR AND THERMAL SENSOR)

[When]

1. Exchange power transistors (Q6050 - Q6056, Q6060 - Q6066).
2. Exchange power amplifier PC board ass'y (NAAF-8911).
3. Exchange thermal sensor PC board ass'y (NAETC-8913).

[Procedure]

<Note>

No output. No input.

Output sensor

1. Press and hold down the CD button, then press the STANDBY/ON button while the unit is Power ON.
" Test - _ " is displayed only for 5 seconds.

Test -  Blinks

2. Press the VIDEO 3 button while " Test - _ " is displayed.
The unit will be in the state of " Test-4-00".

Test - 4-00

3. Repeatedly press TONE+ button until " Test-4-37 " is displayed.

Test - 4-37

4. At this time, confirm that the red characters of " FM STEREO " is displayed.
And, check relay RL6901 and RL6902 are turned off in 2 or 3 seconds.

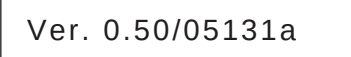
Test - 4-37 

5. Press the STANDBY/ON button.

Clear → Turn off

Thermal sensor

1. Press and hold down the DISPLAY button, then press the STANDBY button when the unit is power ON.
" Ver. 0.50/05131a " is displayed only for 2 seconds.

<Ex.> 

2. Press the TONE button while " Ver.0.50/05131a " is displayed.

<Ex.> 

3. Confirm that the displayed temperature is within +/-20 degree C from the ambient temperatures.

4. Press STANDBY/ON button.

Clear → Turn off

OPERATION CHECK-4(1/2)

DSP DEBUG MODE

The operation of DSP is able to be checked by the information displayed on FL in this debug mode.
This information will help to pursue the cause of trouble.

To set in DSP debug mode

1. Press and hold down the DISPLAY button, then press the STANDBY button while the unit is power ON.

The version number of microprocessor is displayed only for 2 seconds.

<Ex.> Ver. 0.50/05131a

1. Press the TONE+ button within 2 seconds above, the version number of DSP is displayed.

<Ex.> DSP :06421A

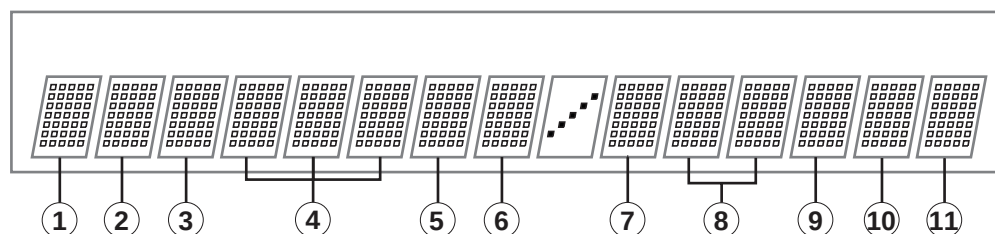
2. Press the DISPLAY button while " DSP :06421A" is displayed. The status of DSP and DIR will be displayed.

<Ex.> E1A48K0N/OFFPoO

To exit

Press STANDBY/ON button.

Content of display



DIR			DSP	
① UNLOCK E = UNLOCK = LOCK	④ Sampling Frequency and Emphasis 32K = 32 kHz without Emphasis 44K = 44.1 kHz without Emphasis 48K = 48kHz without Emphasis 64K = 64 kHz 88K = 88.2 kHz 96K = 96 kHz 176 = 176.4 kHz 192 = 192 kHz 32e = 32 kHz with Emphasis 44e = 44.1 kHz with Emphasis 48e = 48 kHz with Emphasis	⑦ DSP Port 0 = NIC (Normal state) 1 = DEC 2 = BUSY (Abnormal state) 3 = EXEC WAIT	⑧ DSP Sequence 04 = Boot 11 = Restart FF = Free	⑨ DSP Detect Format P = PCM (Analog) D = Dolby Digital d = DTS A = AAC ? = UNKNOWN
② Digital Selector 0 = None 1 = OPT 3 2 = OPT 2 3 = OPT 1 4 = COAX 1 5 = COAX 2 6 = HDMI 7 = FRONT	⑤ CODEC CLOCK MODE N = Normal U = Up Sampling H = High Sampling (Double Rate) D = Down Sampling Q = Quad Rate	⑩ DSP Decode o = Decode OK x = Decode NG	----- Main Micro Processor -----	
③ DIR Status D = Digital A = Analog M = Multich P = Multich PCM p = PCM Fixed d = DTS Fixed	⑥ DIR Detect Type 0 = Analog 1 = PCM 2 = Not PCM 3 = Data 4 = DTS CD (Not used) 5 = Multich 6 = Not Decided	⑪ Mute 0 = Selector IC(Q5501) 1 2 = DSP(Q201) 3 = DIR(Q301)		

OPERATION CHECK-4(2/2)

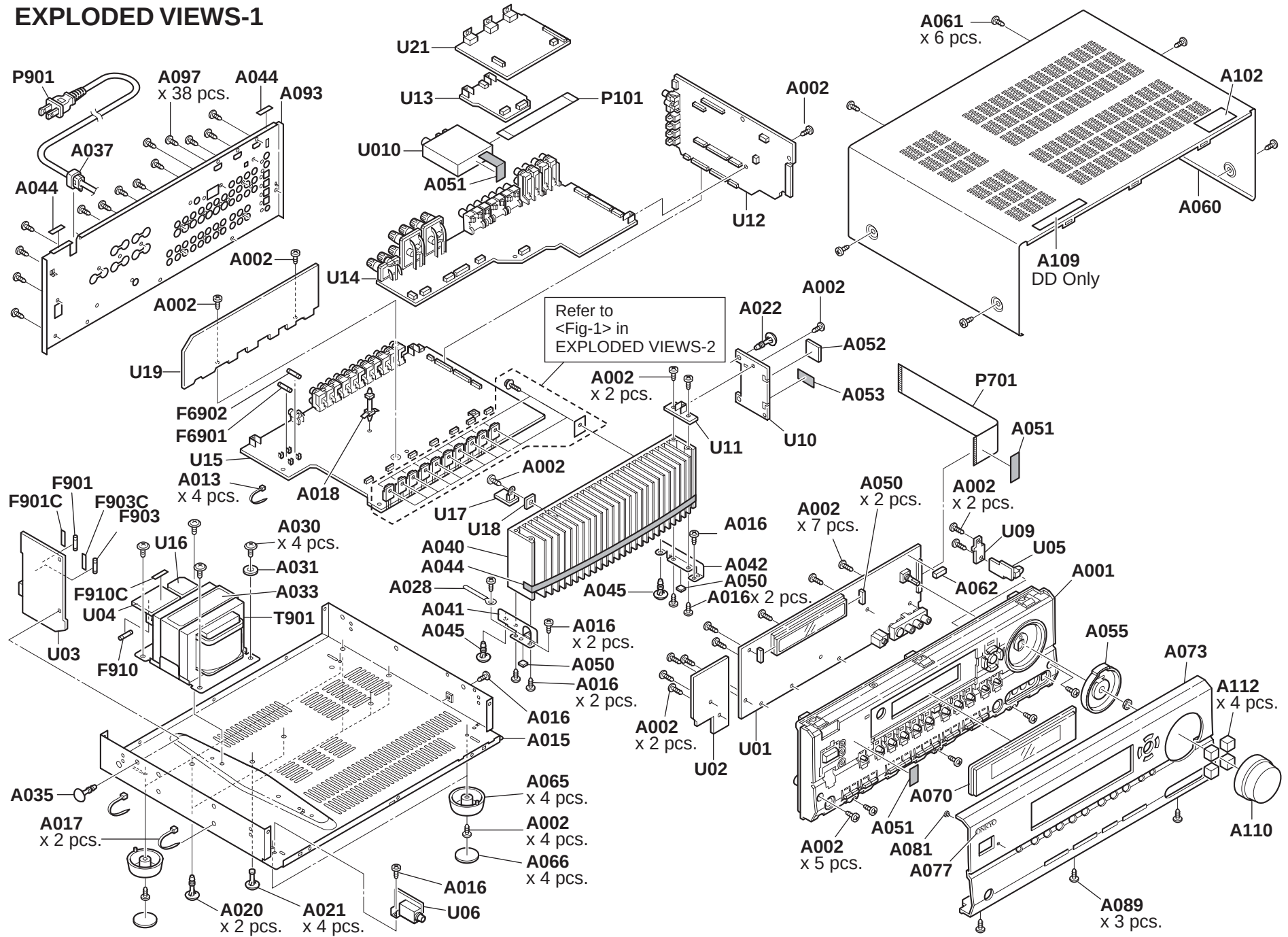
DSP DEBUG MODE

Trouble Cause Analysis by Debug Mode

This debug mode will help in digital audio no sound trouble.
Check information on FL display and the related devices or circuits.

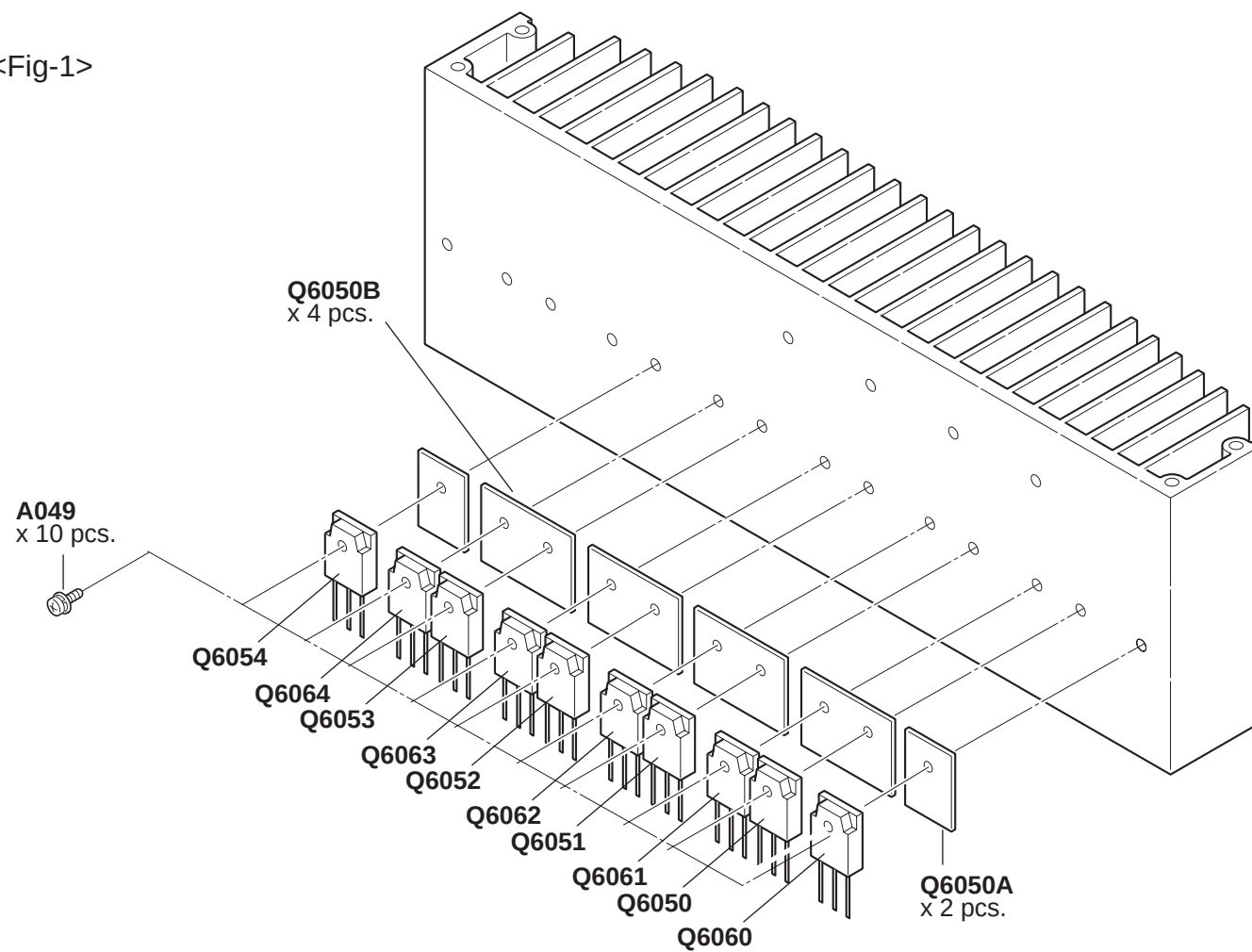
Digit no. on FL	Symptom on display	Cause	Check
①	"E" is displayed	No input signal to DIR	Related devices from digital input to Q301
④	Displayed freq. is different from input	No input signal to DIR	Related devices from digital input to Q301
⑥	Displayed format is different from input	No input signal to DIR	Related devices from digital input to Q301
⑧	"04" or "11" do not change to "FF"	ROM or RAM error	Q281, Q282 & related devices
⑨	Displayed format is different from input	Input signal to DSP is no good	Related devices from Q301 to Q201
⑩	"x" is displayed	Interface between DSP and Micro processor is no good	Related devices from Q701 to Q201
⑪	This identifies IC which outputs error	IC outputs error to main micro processor	Q5501, Q201, Q301 & related devices

EXPLODED VIEWS-1



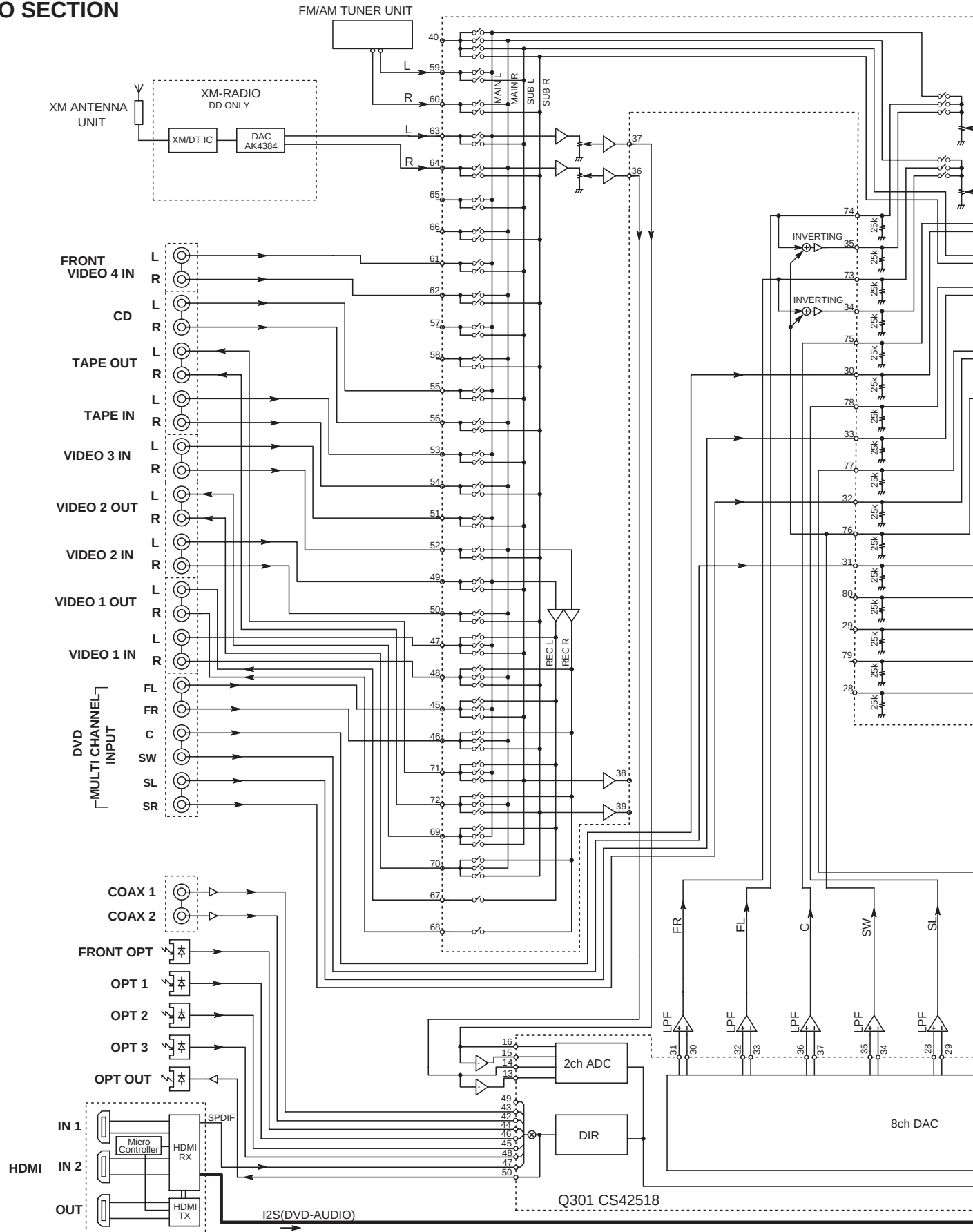
EXPLODED VIEWS-2

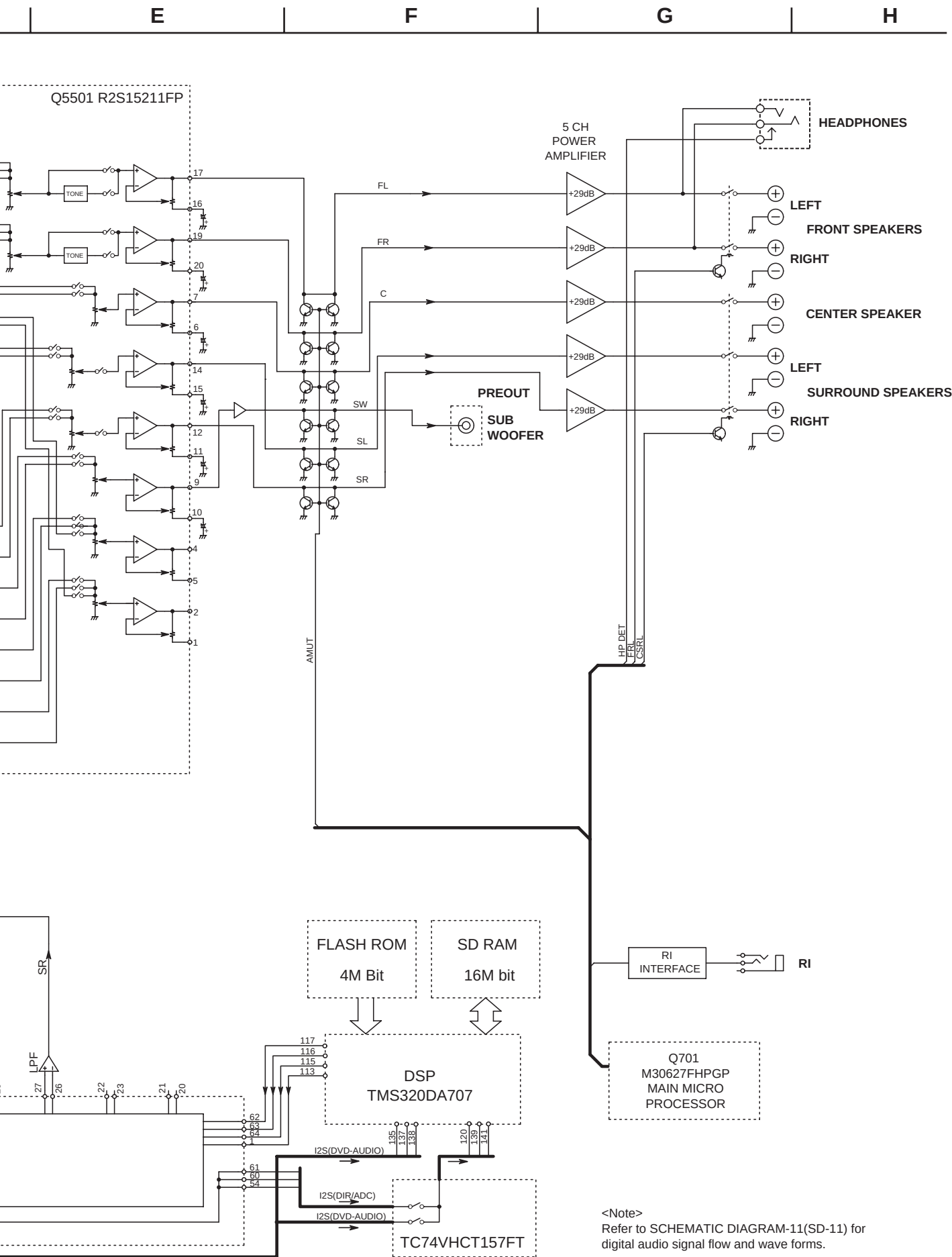
<Fig-1>



BLOCK DIAGRAM-1

AUDIO SECTION

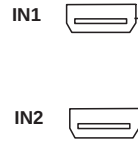




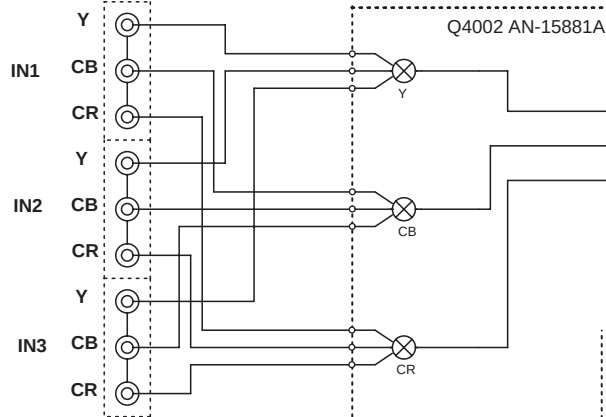
<Note>
Refer to SCHEMATIC DIAGRAM-11(SD-11) for digital audio signal flow and wave forms.

BLOCK DIAGRAM-2 VIDEO SECTION

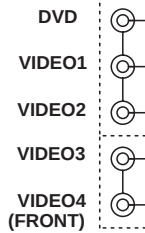
HDMI INPUT



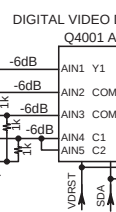
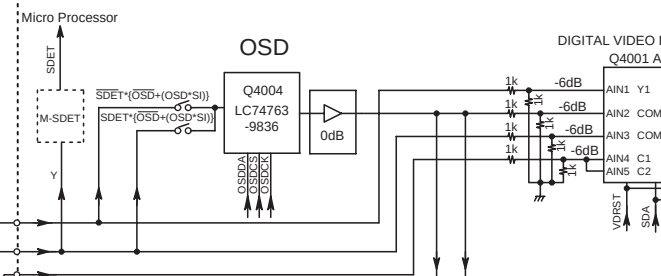
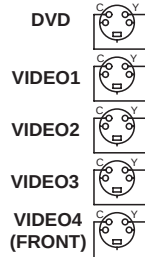
COMPONENT VIDEO INPUT



COMPOSITE VIDEO INPUT



S VIDEO INPUT



Q4

E

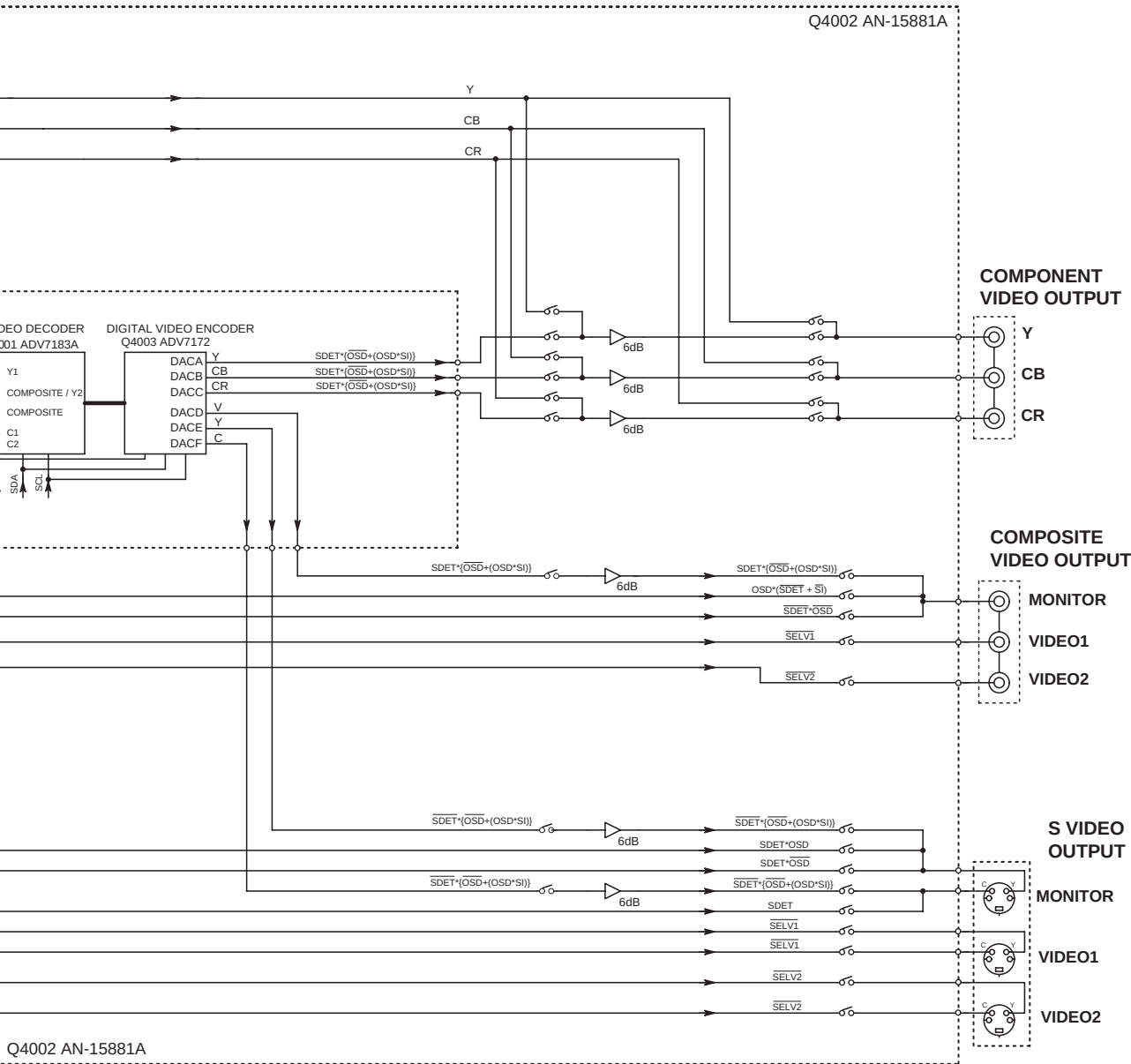
F

G

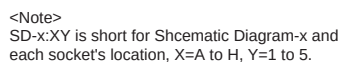
H

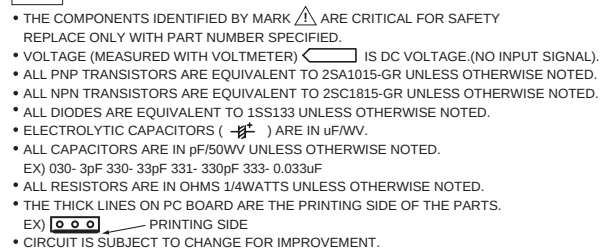
HDMI BOARD

HDMI OUTPUT



AUDIO SECTION





SCHEMATIC DIAGRAM-2(SD-2)

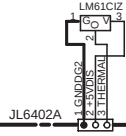
POWER AMP SECTION-1

NAAF-8911 (2/2)

U15

AMPLIFIER PC BOARD

NAETC-8913

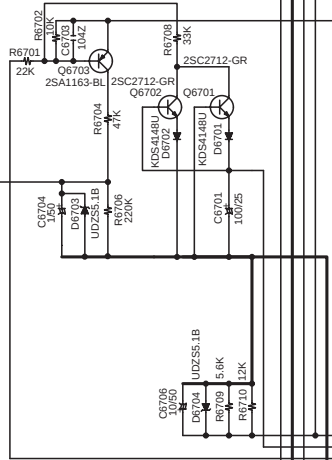
U17
THERMAL
SENSOR
PC BOARDT0 NADG-8816
(SD-6:A2)

POWER TRANSISTOR LIST

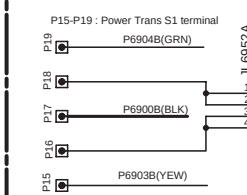
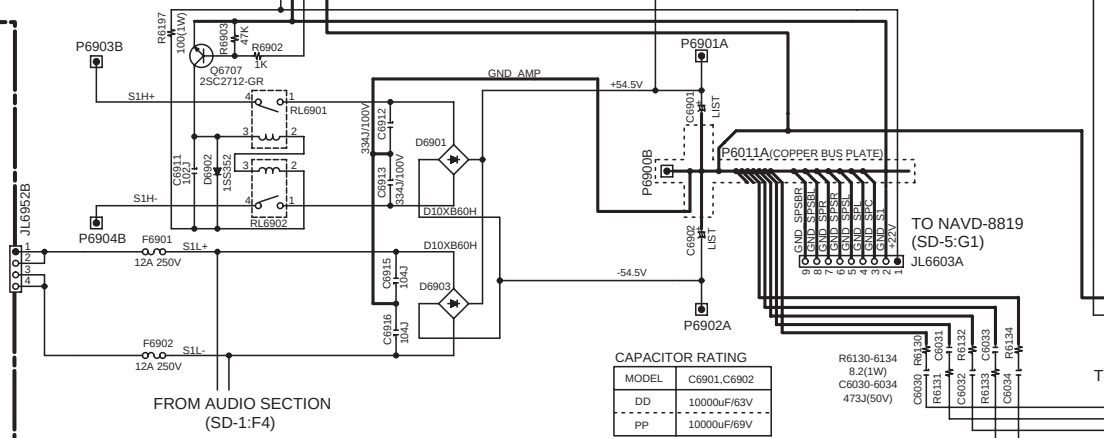
TYPE	Q6050-56	Q6060-66
DD	MN130S	MP130S
PP	2SC5242	2SA1962

NOTE

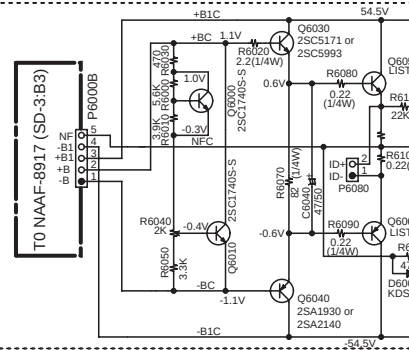
- THE COMPONENTS IDENTIFIED BY MARK ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) IS DC VOLTAGE. (NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS () ARE IN μ F/VV.
- ALL CAPACITORS ARE IN pF/50V/V UNLESS OTHERWISE NOTED.
EX) 030- 3pF 330- 33pF 331- 330pF 333- 0.033 μ F
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX) PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

FROM AUDIO SECTION
(SD-1:G1 & F4)VOLH
SECTH
GND51
+22V
PROTECT

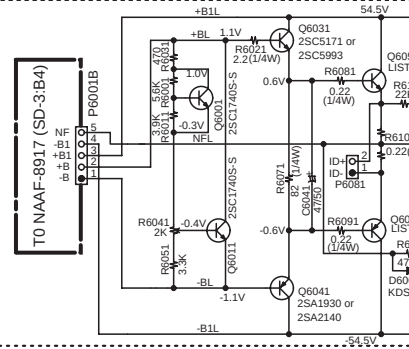
NAPS-8912

U16
SEC. TERMINAL-2 PC BOARDFROM AUDIO SECTION
(SD-1:F4)

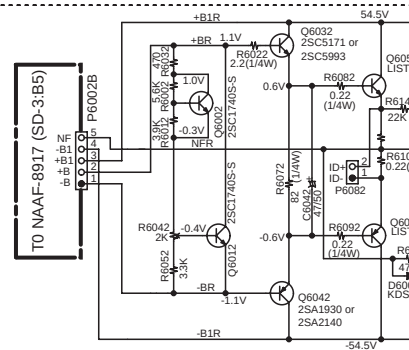
Center ch



Front L ch



Front R ch



CAPACITOR RATING

MODEL	C6901,C6902
DD	10000uF/63V
PP	10000uF/69V

R6130-6134

8.2(1W)

C6930-6934

473J(50V)

<Note>

SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.



SCHEMATIC DIAGRAM-3(SD-3)

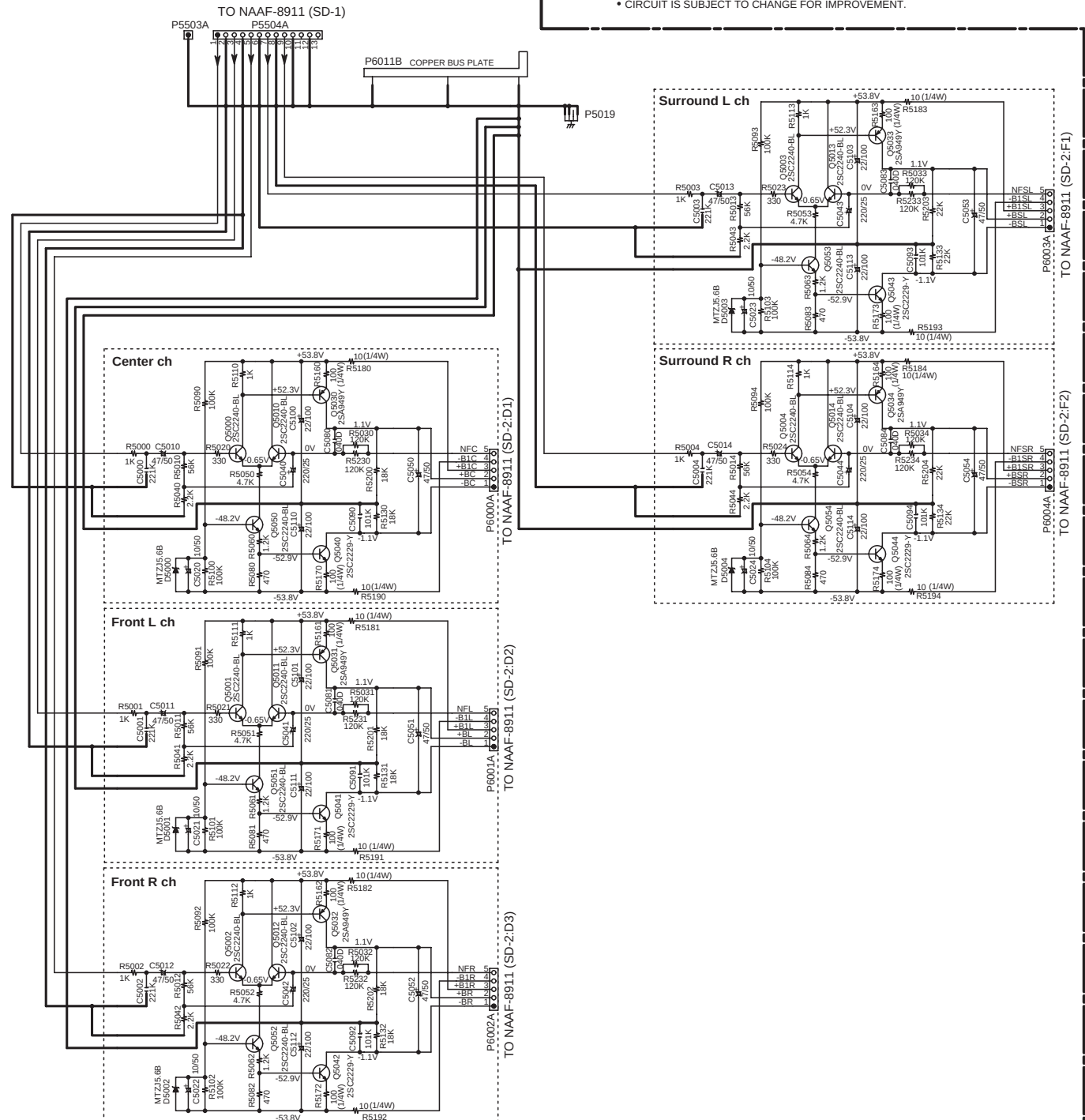
POWER AMP SECTION-2

NAAF-8917

U19 DRIVER AMPLIFIER PC BOARD

NOTE

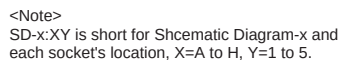
- THE COMPONENTS IDENTIFIED BY MARK $\triangle$ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) $\leftarrow$ IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS ($\text{---}\text{||}\text{---}$) ARE IN $\mu\text{F/WV}$.
- ALL CAPACITORS ARE IN pF/50V UNLESS OTHERWISE NOTED.
EX) 030- 3pF 330- 33pF 331- 330pF 333- 0.033 μF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX) $\square\square\square$ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.



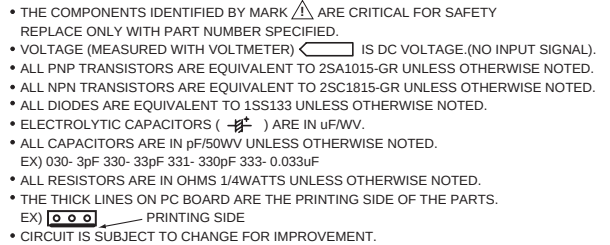
<Note>

SD-x:XY is short for Shcematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

5



<Note>



SCHEMATIC DIAGRAM-6(SD-6)

DSP SECTION

NADG-8816

U12
DSP PC BOARD

TO NADIS-8785 (SD-8:G2)

P701A

TYPE	R103	R104	R105,R107
DD	100(1/2W)	NO	YES
PP	4.7(1/2W)	YES	NO

TO NAVD-8819
(SD-4:F1)TO NAVD-8819
(SD-5:G4)

P2005A

TO NAE1C-8913
(SD-2:B2)

P301A

SD-1:F1

P302A

SD-1:D1

P303A

SD-1:C1

P304A

SD-1:B1

P305A

SD-1:A1

P306A

SD-1:Z1

P307A

SD-1:Y1

P308A

SD-1:X1

P309A

SD-1:W1

P310A

SD-1:V1

P311A

SD-1:U1

P312A

SD-1:T1

P313A

SD-1:S1

P314A

SD-1:R1

P315A

SD-1:Q1

P316A

SD-1:P1

P317A

SD-1:O1

P318A

SD-1:N1

P319A

SD-1:M1

P320A

SD-1:L1

P321A

SD-1:K1

P322A

SD-1:J1

P323A

SD-1:I1

P324A

SD-1:H1

P325A

SD-1:G1

P326A

SD-1:F1

P327A

SD-1:E1

P328A

SD-1:D1

P329A

SD-1:C1

P330A

SD-1:B1

P331A

SD-1:A1

P332A

SD-1:Z1

P333A

SD-1:Y1

P334A

SD-1:X1

P335A

SD-1:W1

P336A

SD-1:V1

P337A

SD-1:U1

P338A

SD-1:T1

P339A

SD-1:S1

P340A

SD-1:R1

P341A

SD-1:Q1

P342A

SD-1:P1

P343A

SD-1:O1

P344A

SD-1:N1

P345A

SD-1:M1

P346A

SD-1:L1

P347A

SD-1:K1

P348A

SD-1:J1

P349A

SD-1:I1

P350A

SD-1:H1

P351A

SD-1:G1

P352A

SD-1:F1

P353A

SD-1:E1

P354A

SD-1:D1

P355A

SD-1:C1

P356A

SD-1:B1

P357A

SD-1:A1

P358A

SD-1:Z1

P359A

SD-1:Y1

P360A

SD-1:X1

P361A

SD-1:W1

P362A

SD-1:V1

P363A

SD-1:U1

P364A

SD-1:T1

P365A

SD-1:S1

P366A

SD-1:R1

P367A

SD-1:Q1

P368A

SD-1:P1

P369A

SD-1:O1

P370A

SD-1:N1

P371A

SD-1:M1

P372A

SD-1:L1

P373A

SD-1:K1

P374A

SD-1:J1

P375A

SD-1:I1

P376A

SD-1:H1

P377A

SD-1:G1

P378A

SD-1:F1

P379A

SD-1:E1

P380A

SD-1:D1

P381A

SD-1:C1

P382A

SD-1:B1

P383A

SD-1:A1

P384A

SD-1:Z1

P385A

SD-1:Y1

P386A

SD-1:X1

P387A

SD-1:W1

P388A

SD-1:V1

P389A

SD-1:U1

P390A

SD-1:T1

P391A

SD-1:S1

P392A

SD-1:R1

P393A

SD-1:Q1

P394A

SD-1:P1

P395A

SD-1:O1

P396A

SD-1:N1

P397A

SD-1:M1

P398A

SD-1:L1

P399A

SD-1:K1

P400A

SD-1:J1

P401A

SD-1:I1

P402A

SD-1:H1

P403A

SD-1:G1

P404A

SD-1:F1

P405A

SD-1:E1

P406A

SD-1:D1

P407A

SD-1:C1

P408A

SD-1:B1

P409A

SD-1:A1

P410A

SD-1:Z1

P411A

SD-1:Y1

P412A

SD-1:X1

P413A

SD-1:W1

P414A

SD-1:V1

P415A

SD-1:U1

P416A

SD-1:T1

P417A

SD-1:S1

P418A

SD-1:R1

P419A

SD-1:Q1

P420A

SD-1:P1

P421A

SD-1:O1

P422A

SD-1:N1

P423A

SD-1:M1

P424A

SD-1:L1

P425A

SD-1:K1

P426A

SD-1:J1

P427A

SD-1:I1

P428A

SD-1:H1

P429A

SD-1:G1

P430A

SD-1:F1

P431A

SD-1:E1

P432A

SD-1:D1

P433A

SD-1:C1

P434A

SD-1:B1

P435A

SD-1:A1

P436A

SD-1:Z1

P437A

SD-1:Y1

P438A

SD-1:X1

P439A

SD-1:W1

P440A

SD-1:V1

P441A

SD-1:U1

P442A

SD-1:T1

P443A

SD-1:S1

P444A

SD-1:R1

P445A

SD-1:Q1

P446A

SD-1:P1

P447A

SD-1:O1

P448A

SD-1:N1

P449A

SD-1:M1

P450A

SD-1:L1

P451A

SD-1:K1

P452A

SD-1:J1

P453A

SD-1:I1

P454A

SD-1:H1

P455A

SD-1:G1

P456A

SD-1:F1

P457A

SD-1:E1

P458A

SD-1:D1

P459A

SD-1:C1

P460A

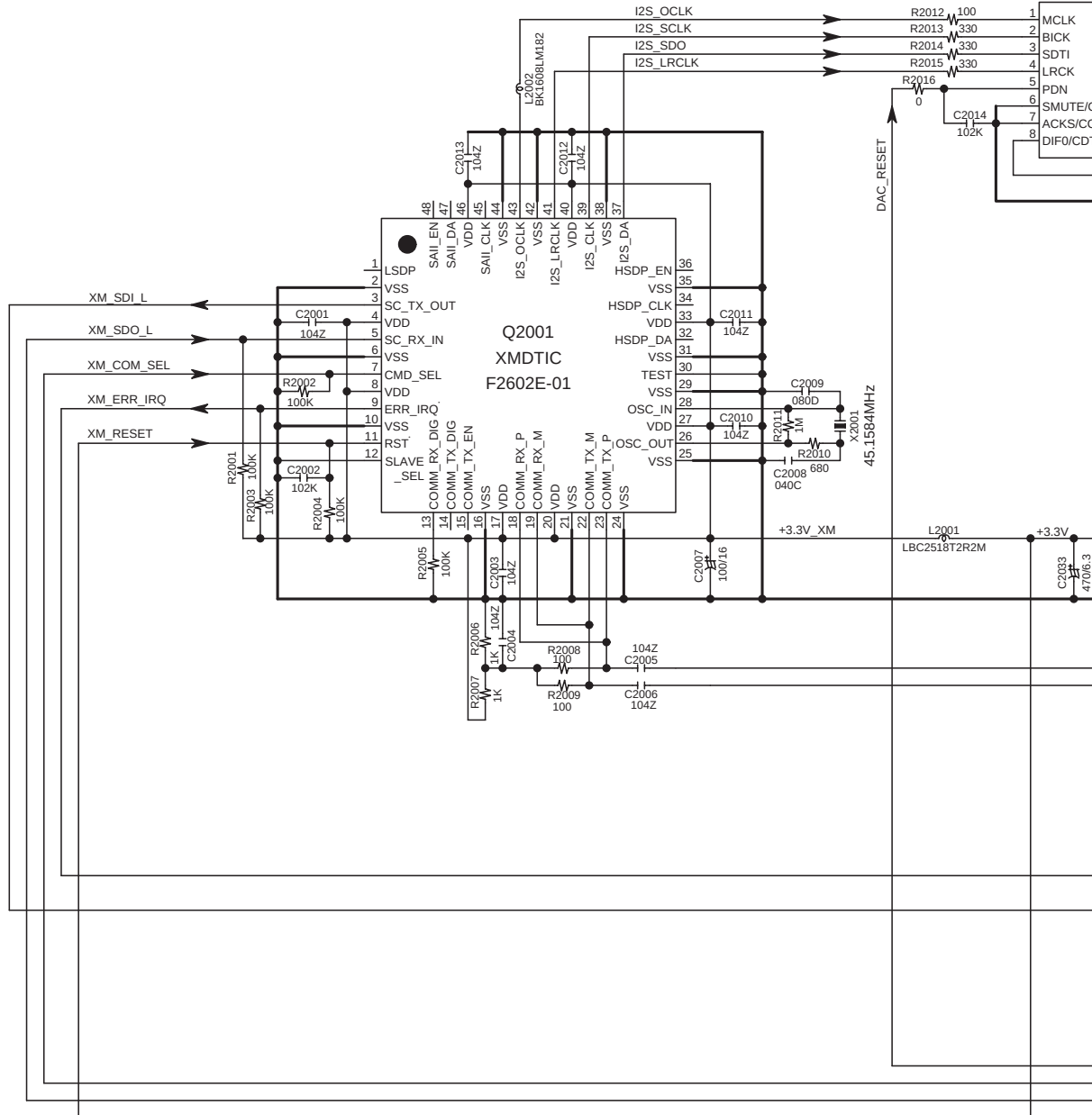
SD-1:B1

P461A

<Note>
SD-x:XY is short for Schematic Diagram-x and
each socket's location, X=A to H, Y=1 to 5.

SCHEMATIC DIAGRAM-7

NADG-8817

U13 XM PC BOARD

NOTE

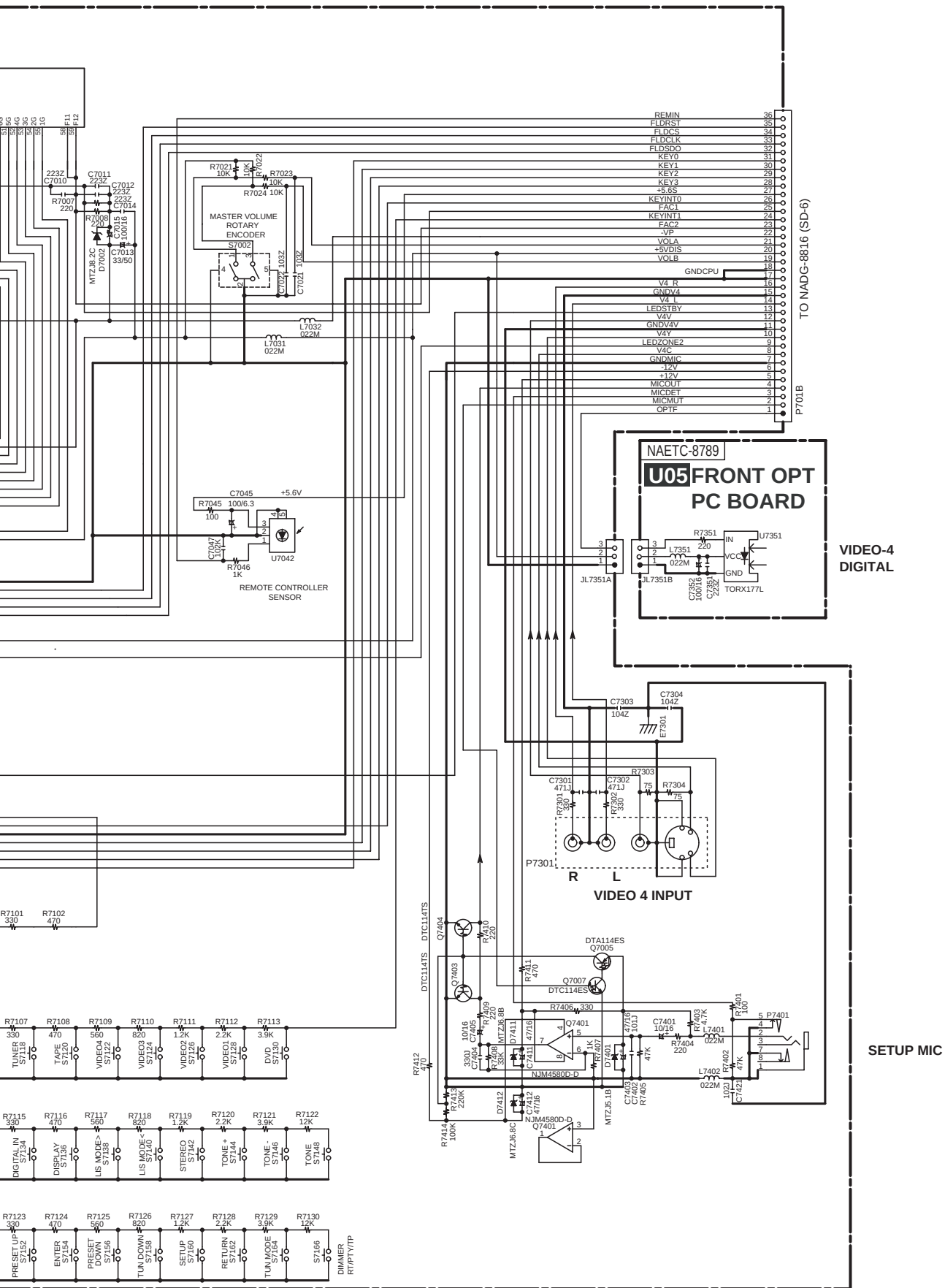
- THE COMPONENTS IDENTIFIED BY MARK  ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER)  IS DC VOLTAGE (NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS () ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
EX) 030- 3pF 330- 33pF 331- 330pF 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX)  PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.



JL101B
TO NADG-8816 (SD-6:E1)

<Note>
SD-x:XY is short for Schematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

5



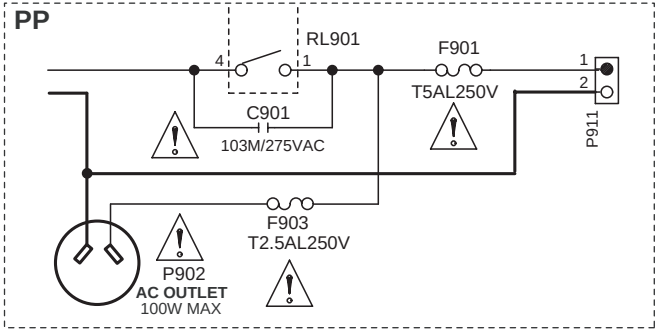
SCHEMATIC DIAGRAM-9(SD-9)
POWER SUPPLY SECTION

NOTE

- THE COMPONENTS IDENTIFIED BY MARK  ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER)  IS DC VOLTAGE.(NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS () ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
EX) 030- 3pF 330- 33pF 331- 330pF 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
EX)  PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

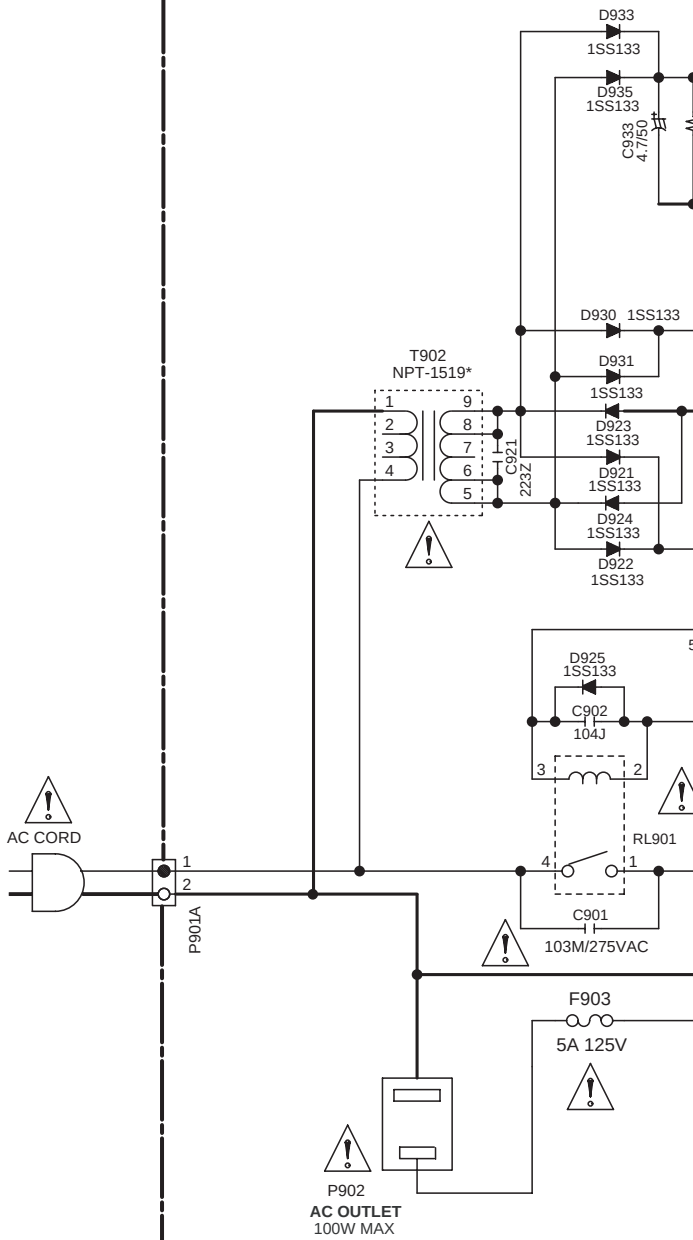
<Note>

SD-x:XY is short for Shcematic Diagram-x and
each socket's location, X=A to H, Y=1 to 5.



NAPS-8787

U03 POWER SUPPLY PC BOARD

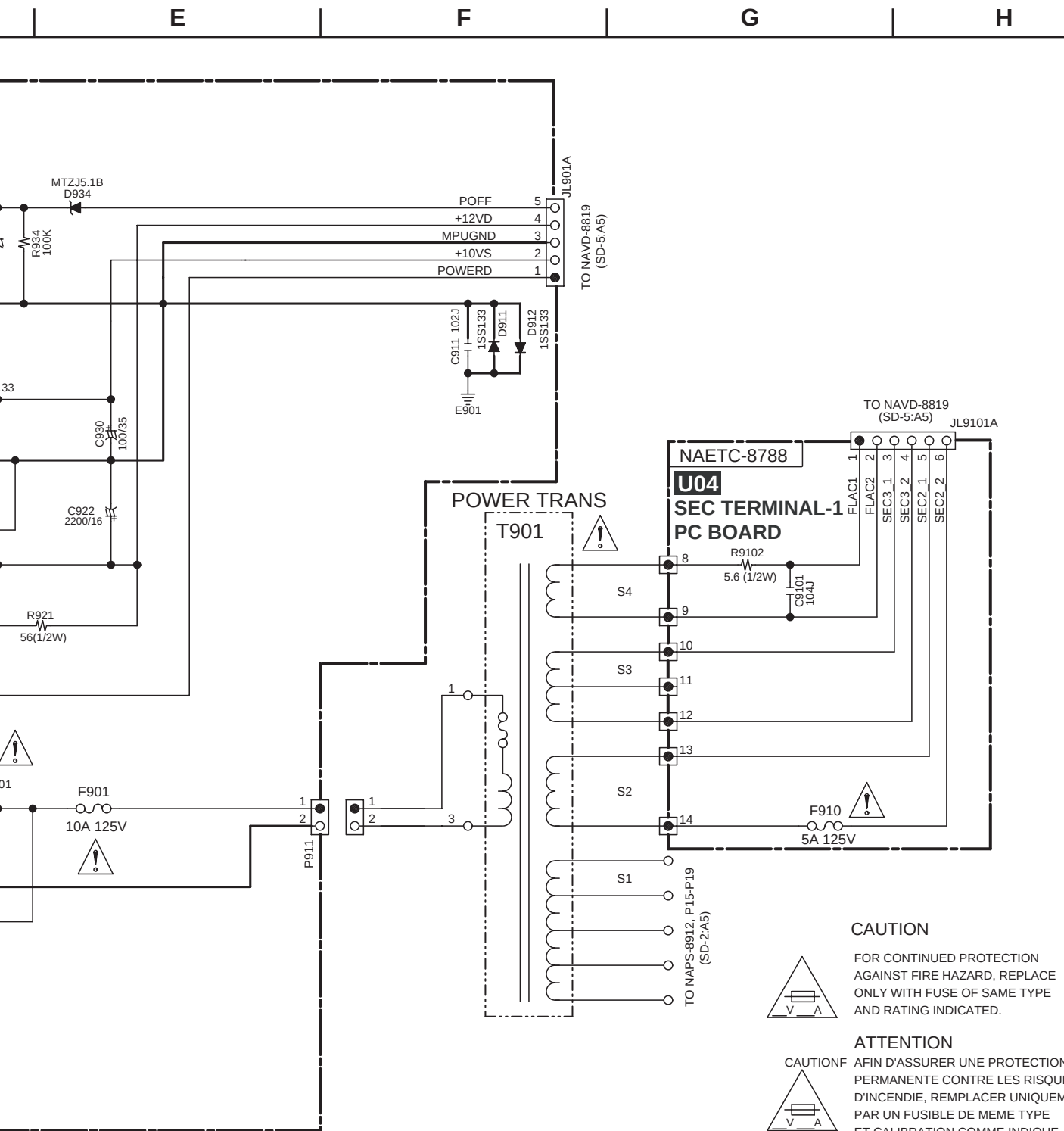


POWER SUPPLY VOLTAGE AND FREQ.

TYPE	AC
D	120V 60HZ
P	230-240V 50HZ

POWER TRANSFORMER

TYPE	T901	T902
D	NPT-1518D	NPT-1520JQ
P	NPT-1518P	NPT-1519GQ

**CAUTION**

FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD, REPLACE
ONLY WITH FUSE OF SAME TYPE
AND RATING INDICATED.

**ATTENTION**

CAUTIONF AFIN D'ASSURER UNE PROTECTION
PERMANENTE CONTRE LES RISQUES
D'INCENDIE, REMPLACER UNIQUEMENT
PAR UN FUSIBLE DE MEME TYPE
ET CALIBRATION COMME INDIQUE.

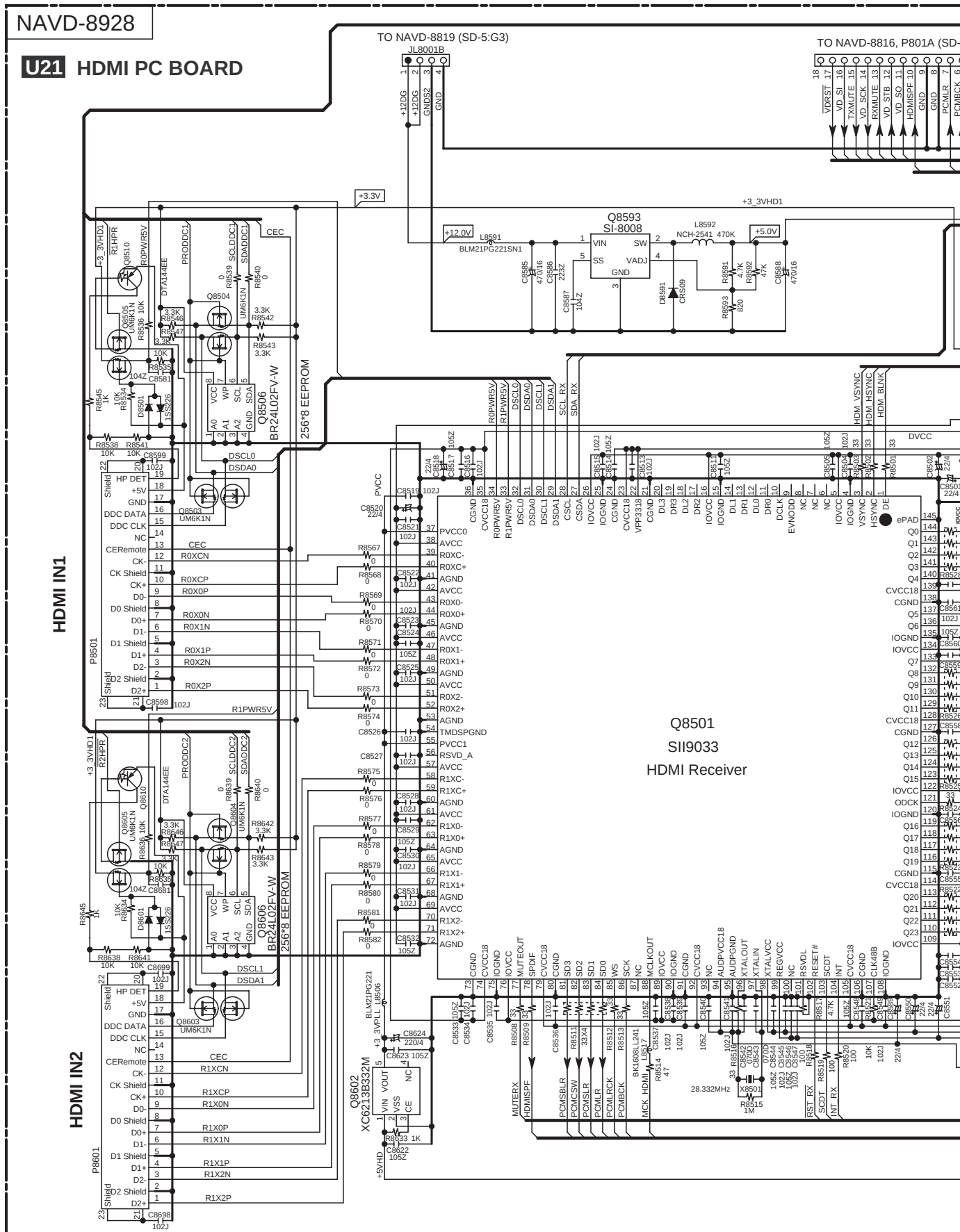


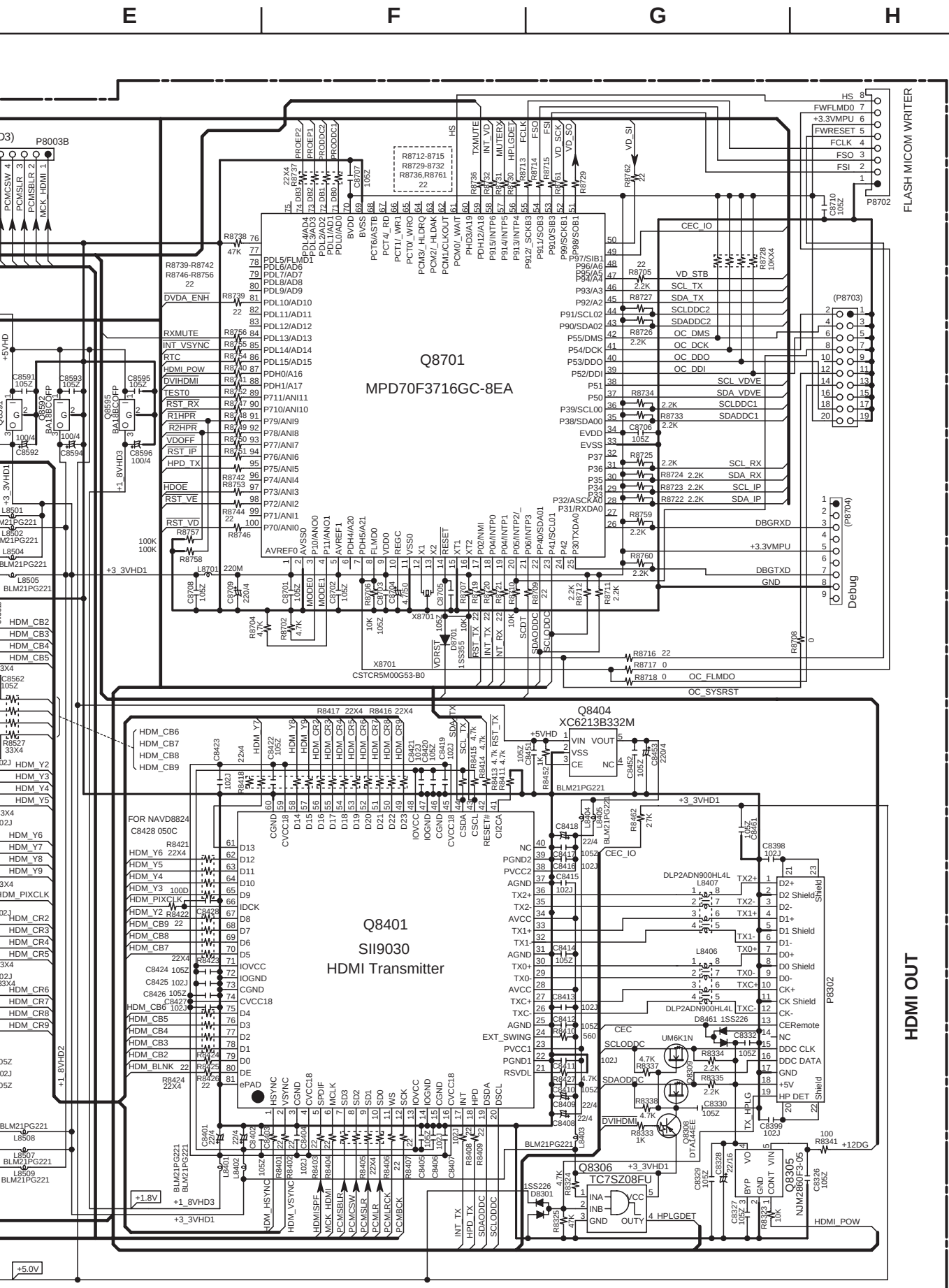
THIS SYMBOL LOCATED NEAR THE FUSE INDICATES
THAT THE FUSE USED IS SLOW OPERATING TYPE
FOR CONTINUED PROTECTION AGAINST FIRE FUSE
HAZARD, REPLACE WITH SAME TYPE FUSE. FOR FUSE
RATING REFER TO THE MAKING ADJACENT TO THE SYMBOL.



CE SYMBOLE INDIQUE QUE LE FUSIBLE UTILISE EST
A LENT, E POUR UNE PROTECTION PERMANENTE, N'UTILISER
QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST
INDIQUE LA QU LE PRESENT SYMBOLE EST APPOSE.

U21 HDMI PC BOARD





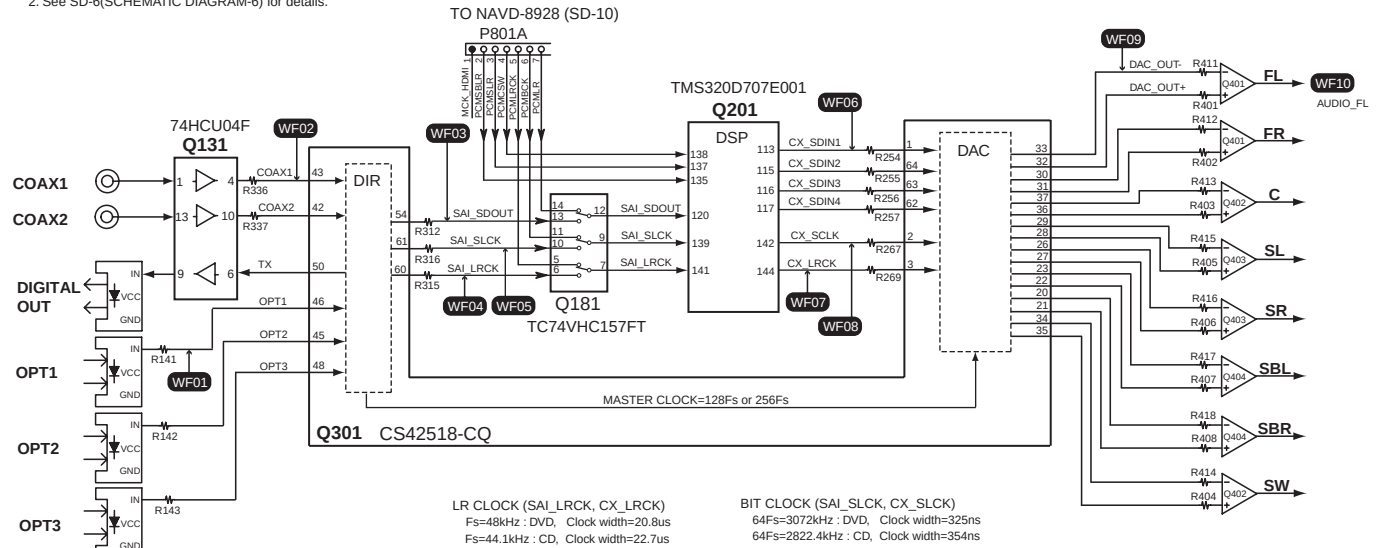
<Note>
SD-x:XY is short for Schematic Diagram-x and each socket's location, X=A to H, Y=1 to 5.

SCHEMATIC DIAGRAM-11

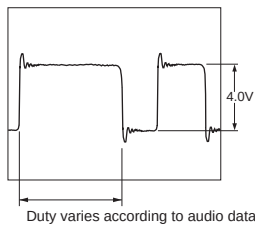
DIGITAL AUDIO WAVE FORM SECTION

NOTE:

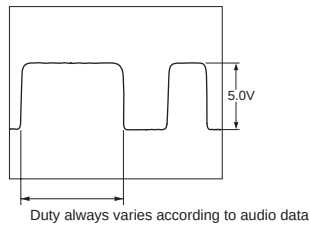
- (WF01) is short for (WaveForm01)
- See SD-6(SCHEMATIC DIAGRAM-6) for details.



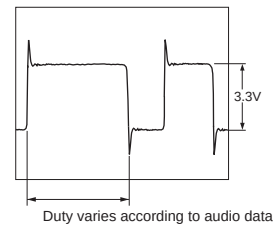
WF01 OPT1



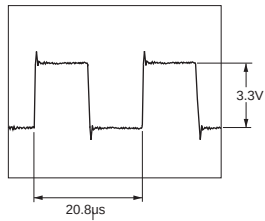
WF02 COAX1



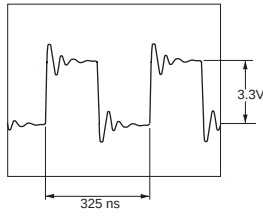
WF03 SAI_SDO



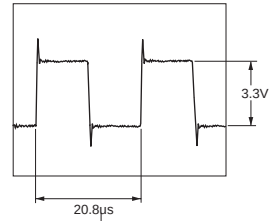
WF04 SAI_LRCK



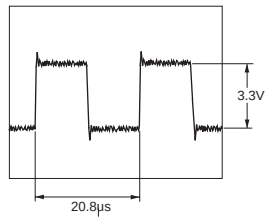
WF05 SAI_SLCK



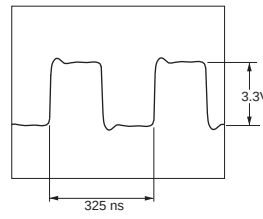
WF06 CX_SDIN1



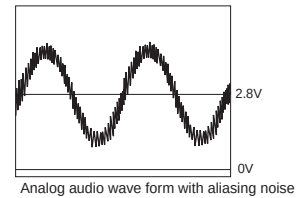
WF07 CX_LRCK



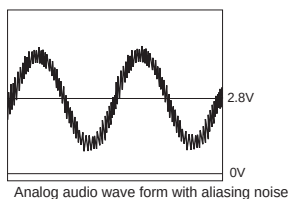
WF08 CX_SCLK



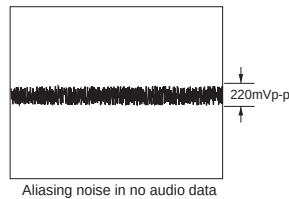
WF09 DAC_OUT-



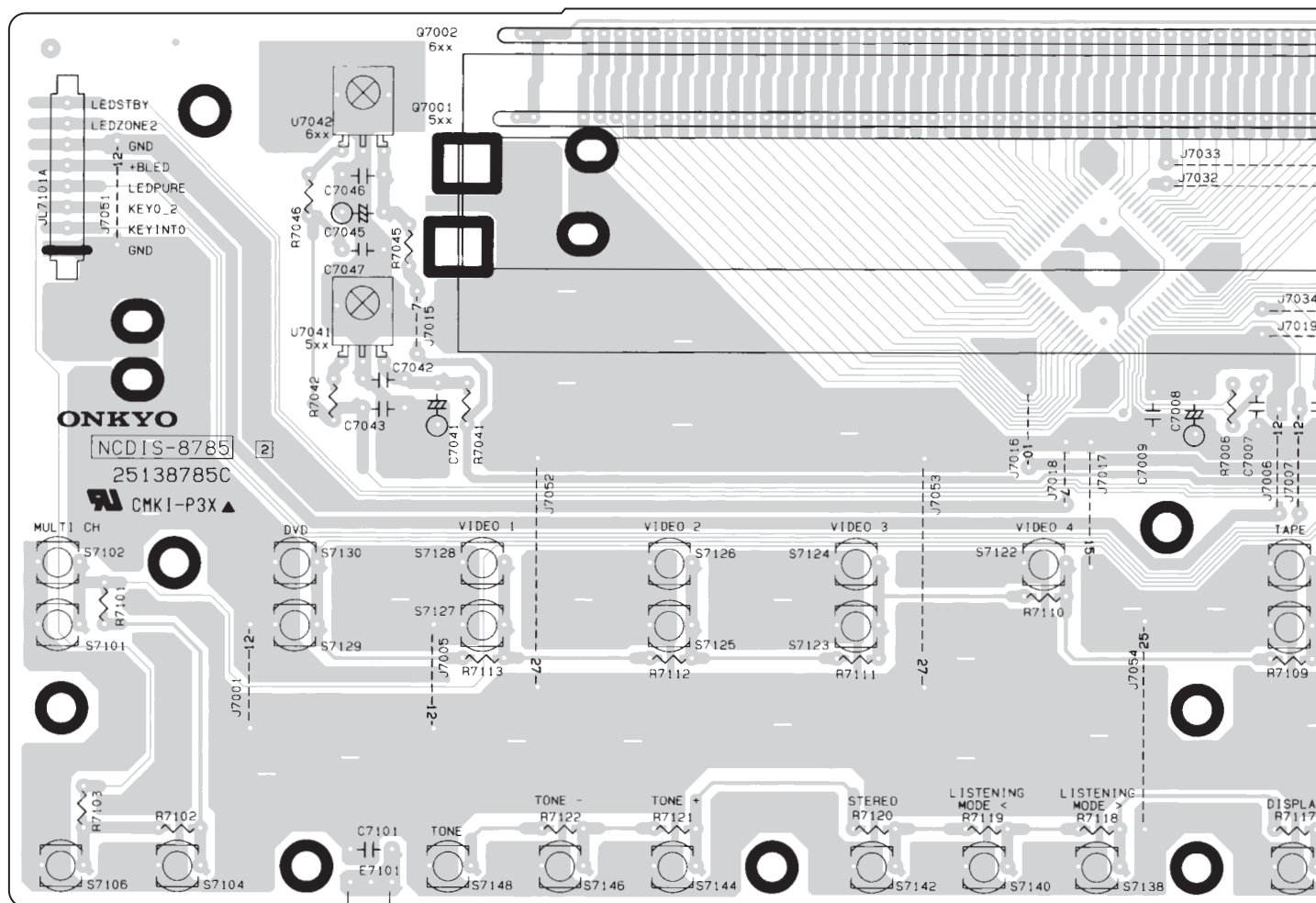
WF10 AUDIO_FL



WF10 AUDIO_FL



Component Side



A

B

C

D

PRINTED CIRCUIT BOARD VIEWS-2

U01 DISPLAY PC BOARD
(NADIS-8785)

Soldering Side

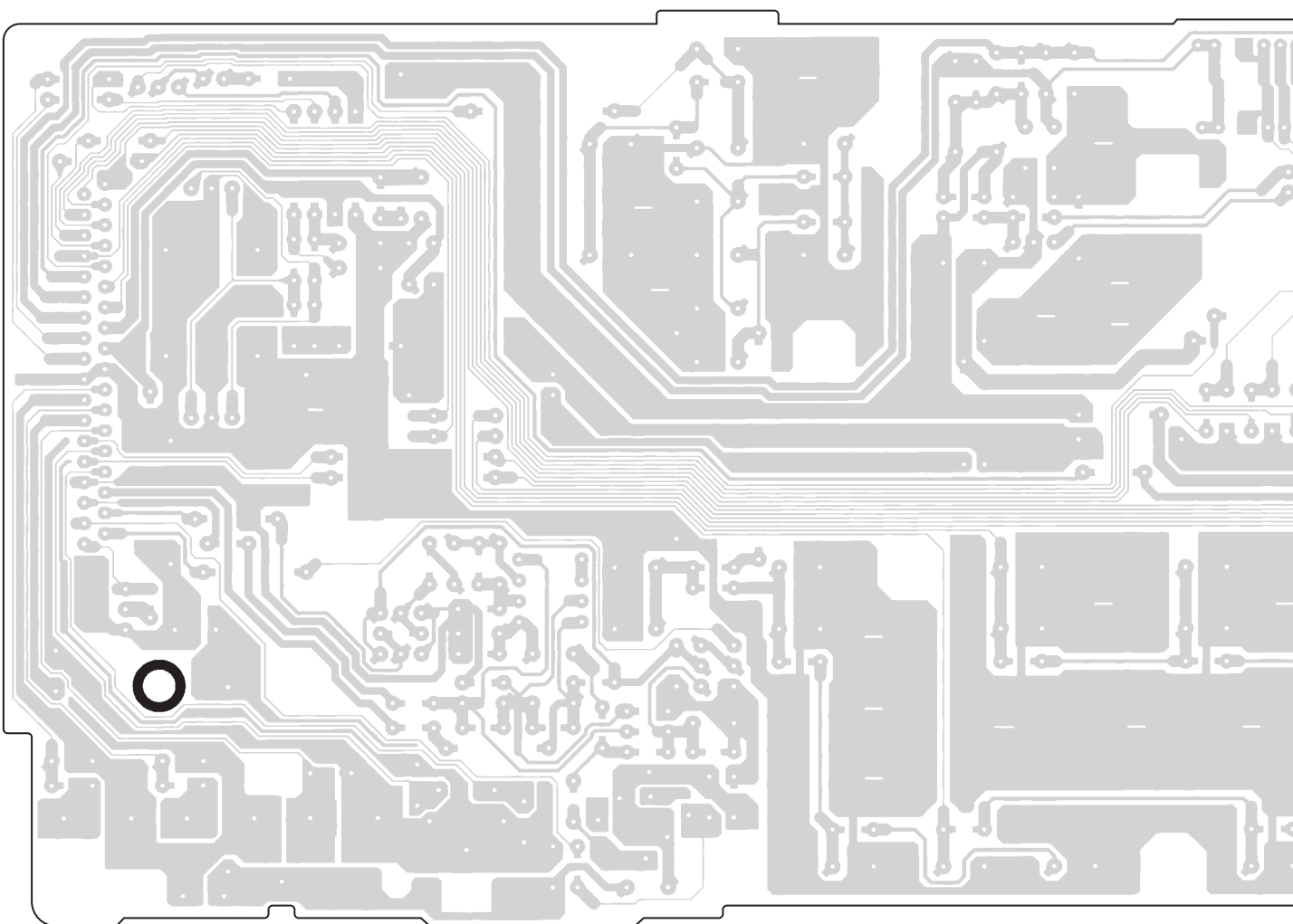
1

2

3

4

5

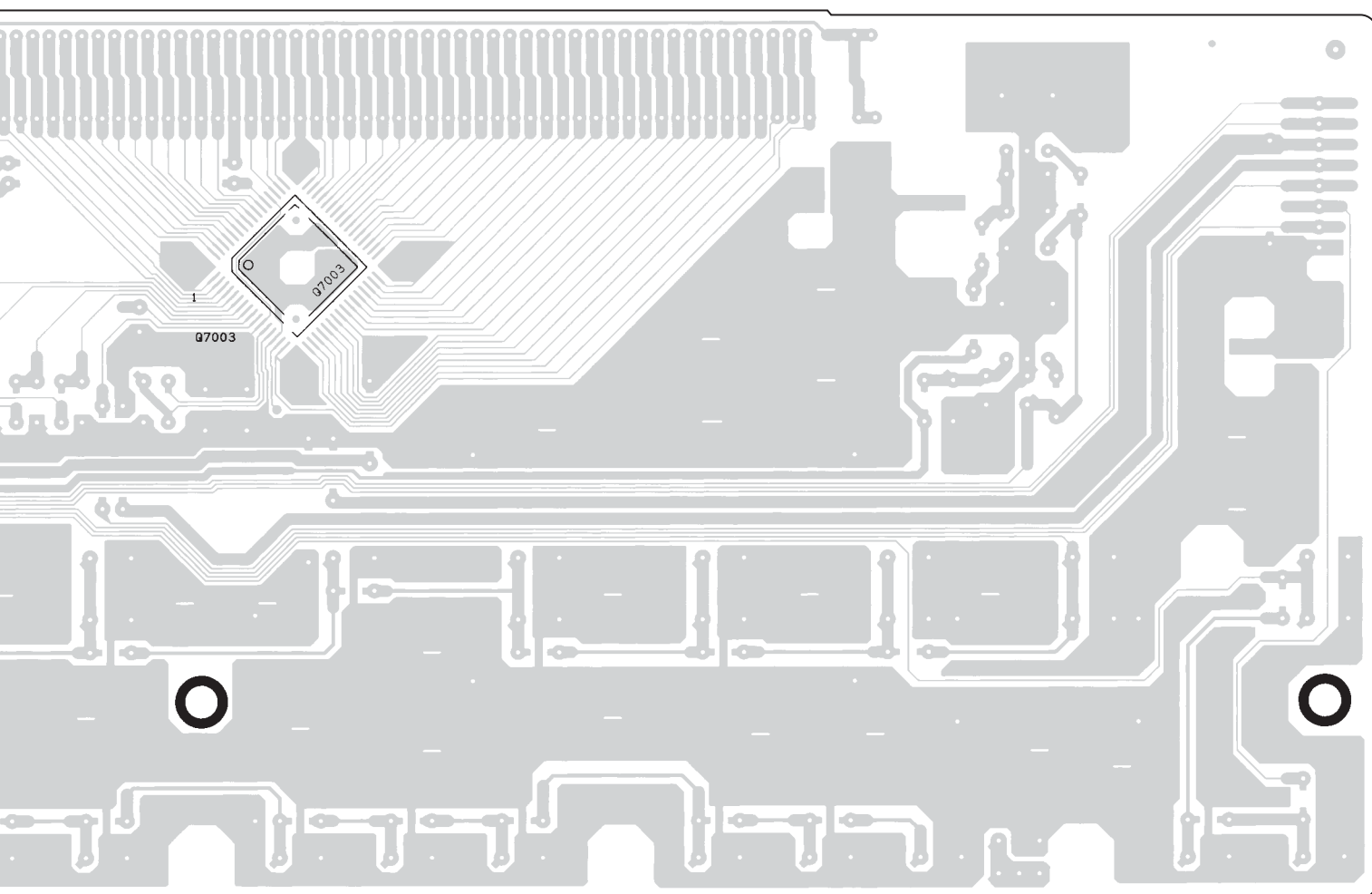


E

F

G

H



A

B

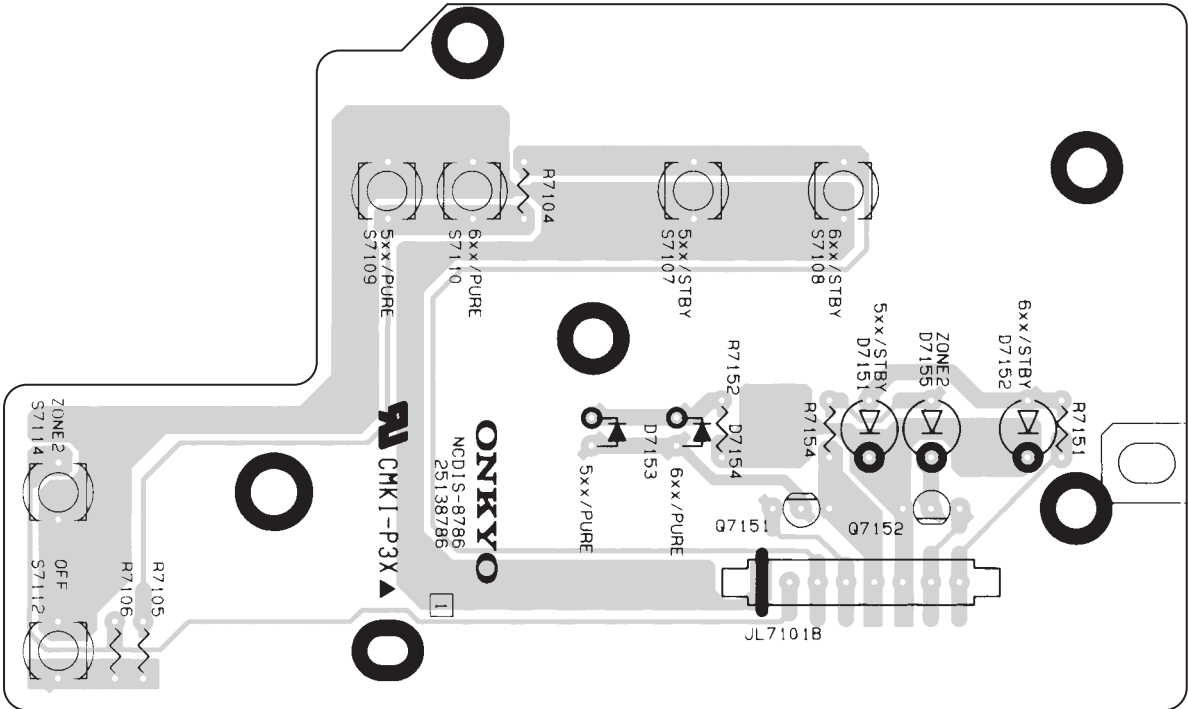
C

D

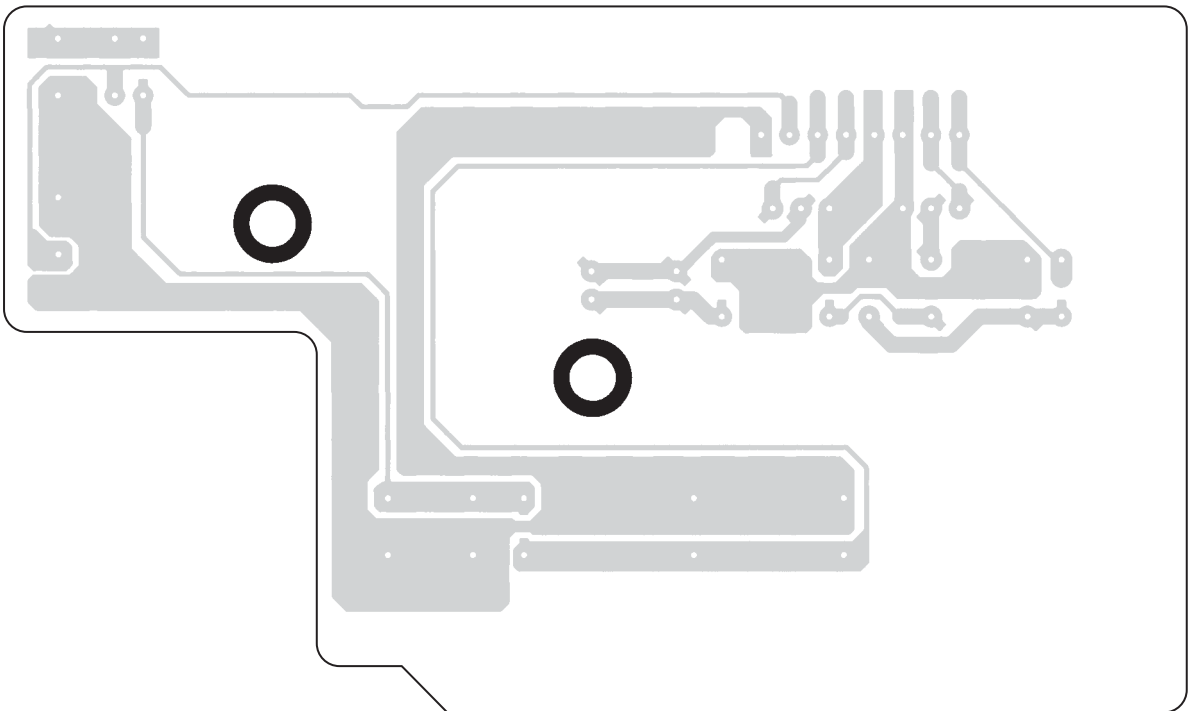
PRINTED CIRCUIT BOARD VIEWS-3

U02 SWITCH PC BOARD
(NADIS-8786)

Component Side



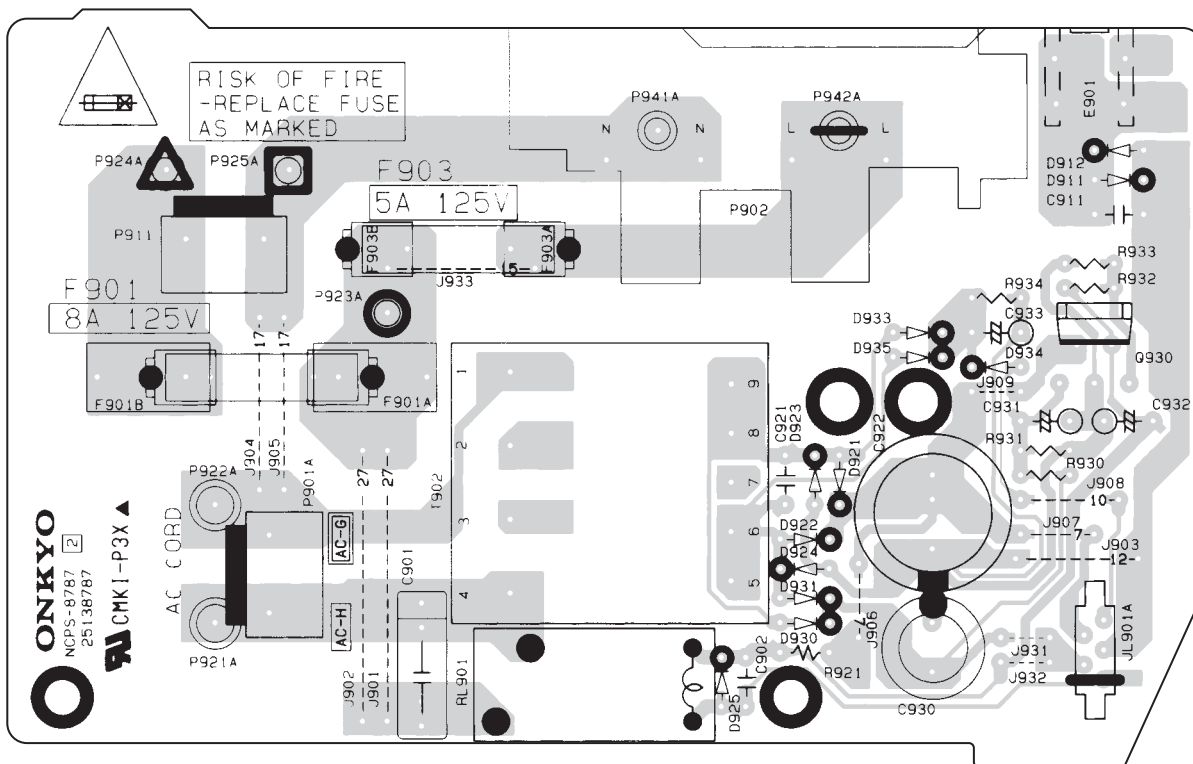
Soldering Side



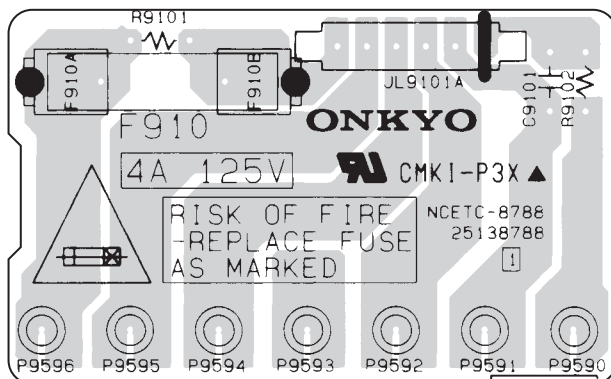
PRINTED CIRCUIT BOARD VIEWS-4

U03 POWER SUPPLY PC BOARD
(NAPS-8787)

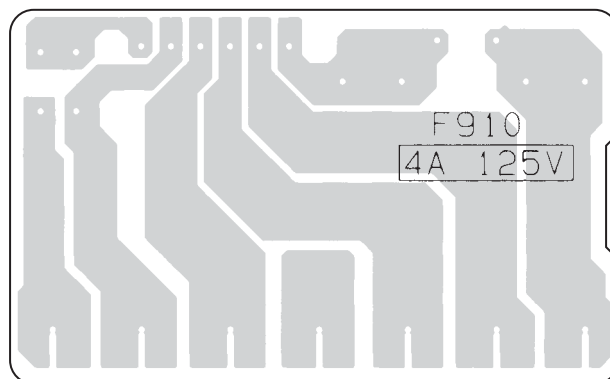
Component Side

**U04** SEC. TERMINAL-1 PC BOARD
(NAETC-8788)

Component Side



Soldering Side



A

B

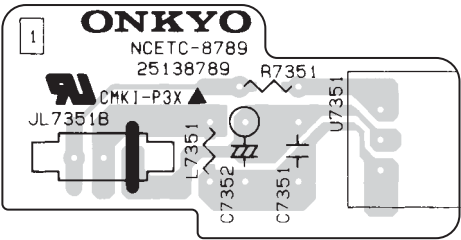
C

D

PRINTED CIRCUIT BOARD VIEWS-5

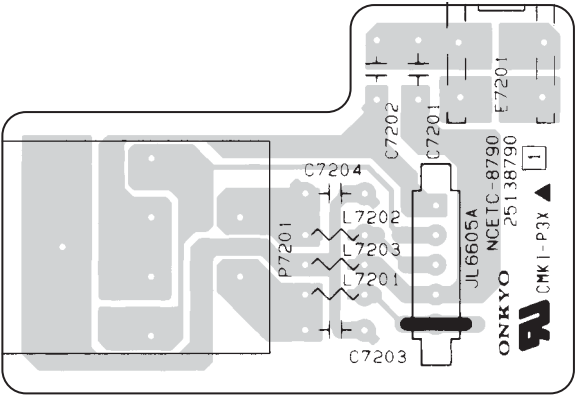
1

U05 FRONT OPT PC BOARD
(NAETC-8789)
Component Side



2

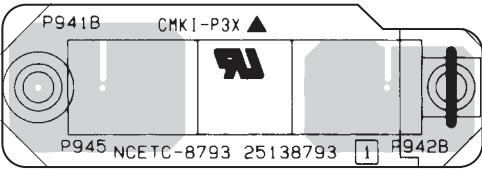
U06 HEADPHONE JACK PC BOARD
(NAETC-8790)
Component Side



3

4

U07 OUTLET TERMINAL PC BOARD
(NAETC-8793)
Component Side



5

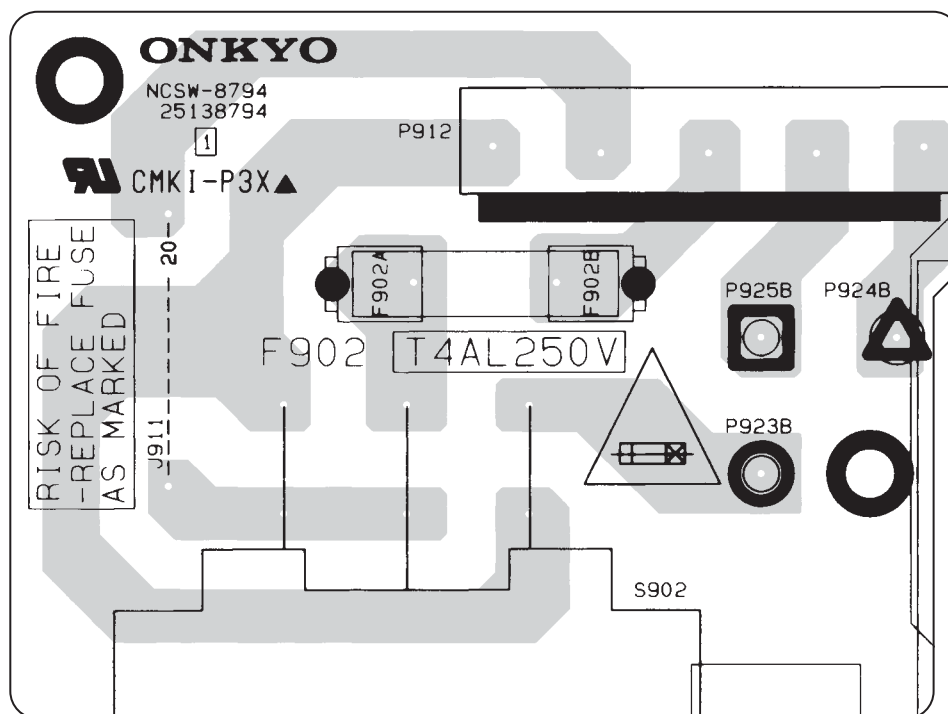
E

F

G

H

U08 PRI. SWITCH PC BOARD
(NASW-8794)
Component Side



A

B

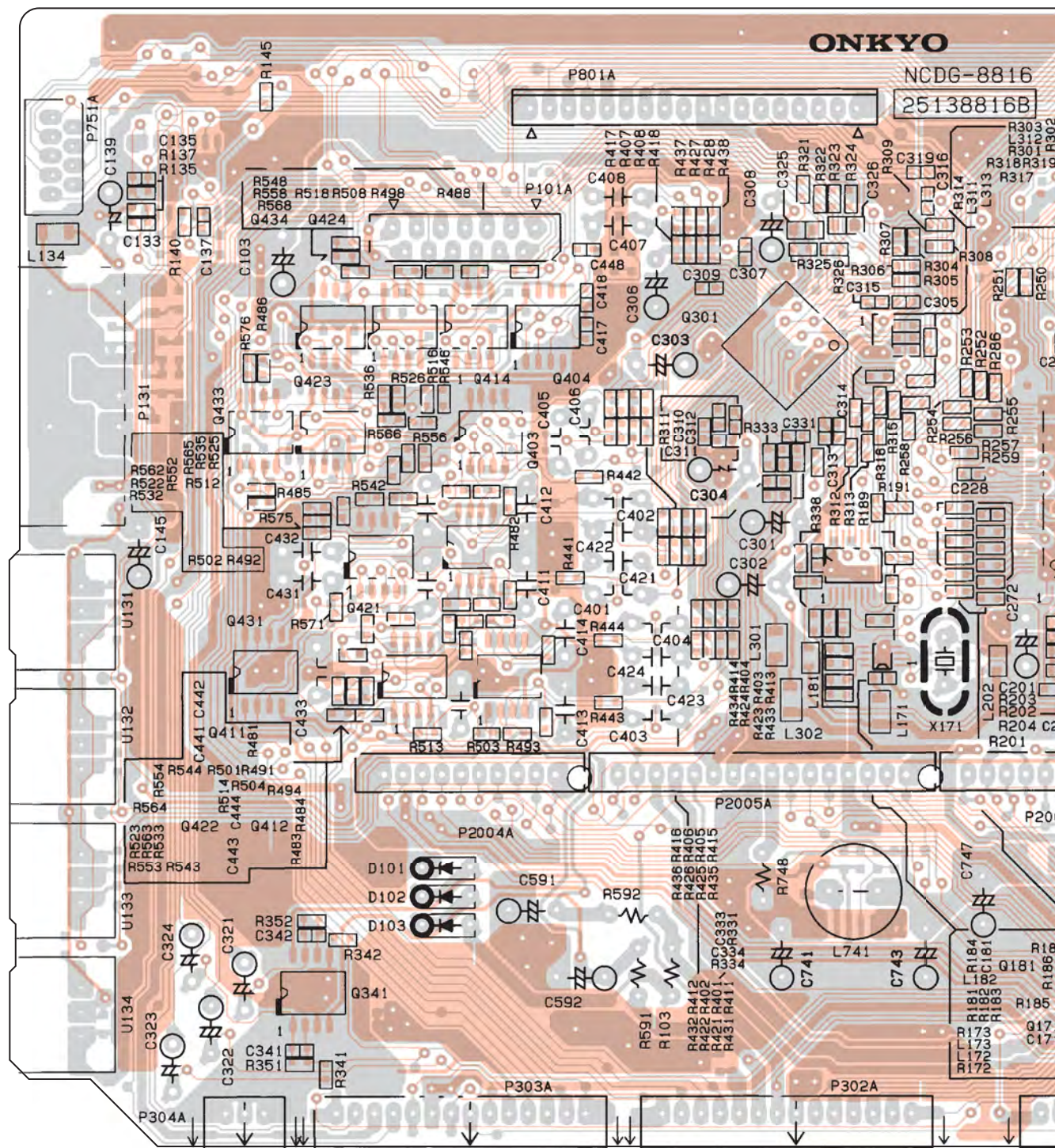
C

D

PRINTED CIRCUIT BOARD VIEWS-6

U12 DSP PC BOARD
(NADG-8816)

Component Side

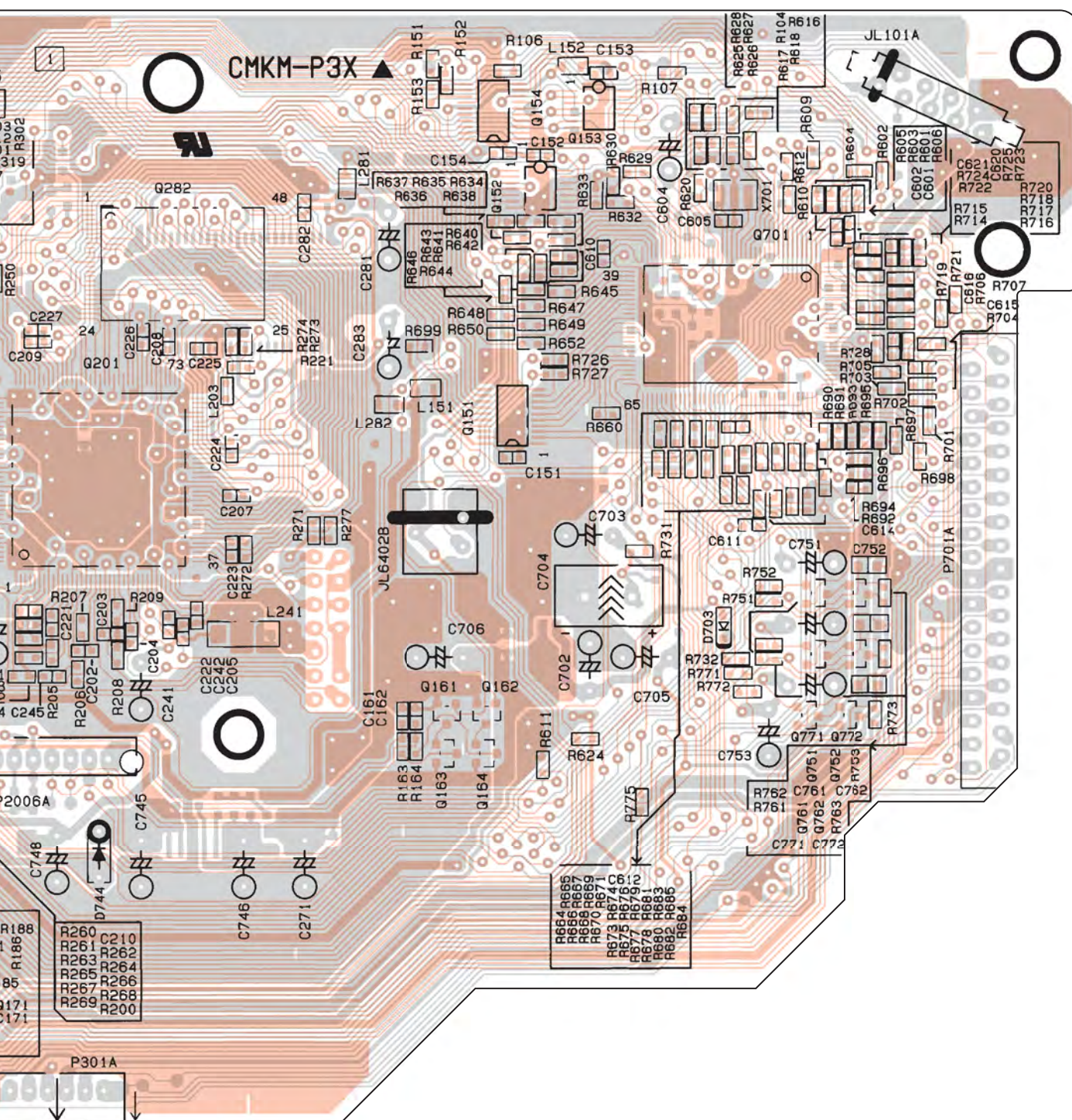


E

F

G

H



A

B

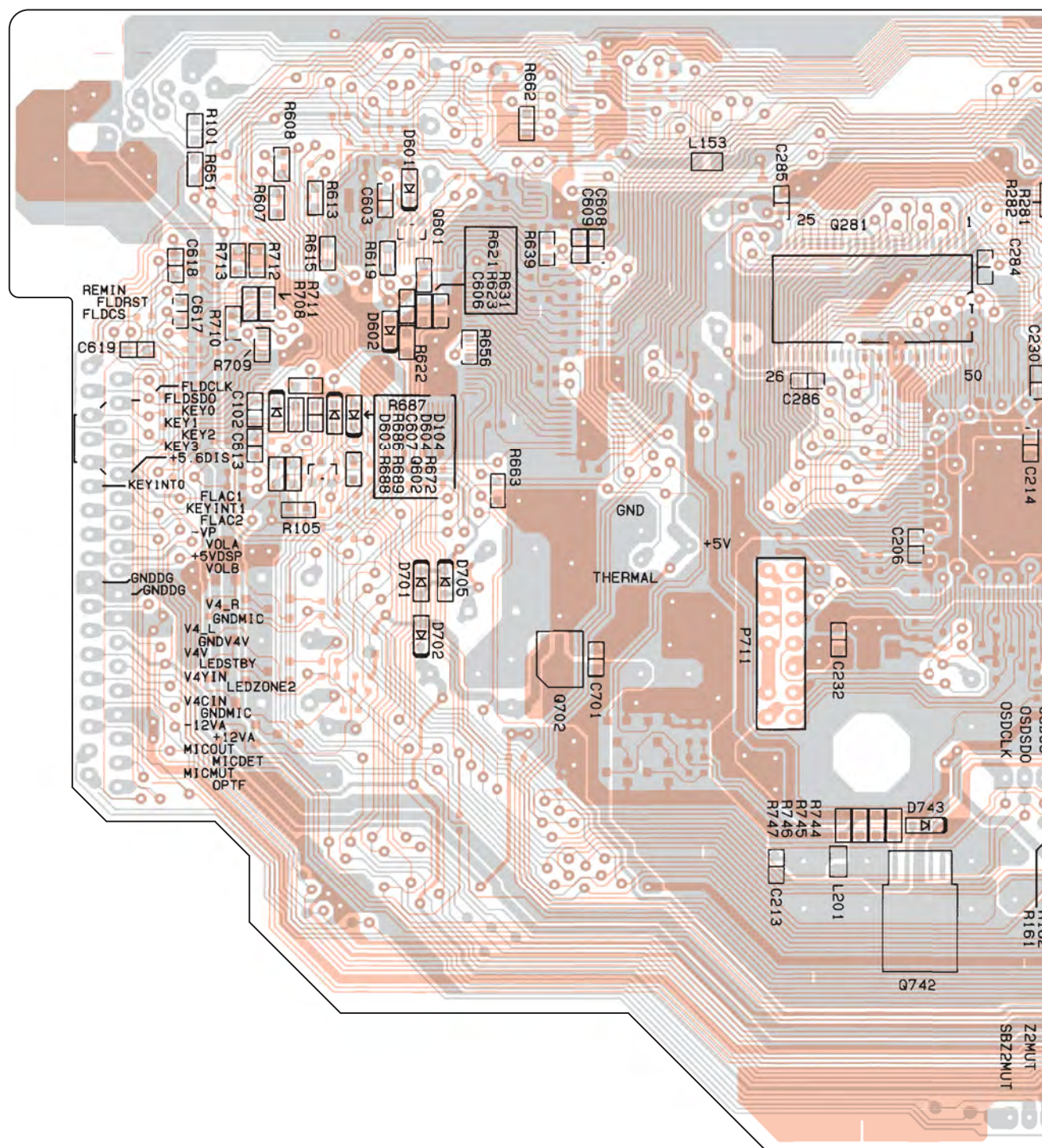
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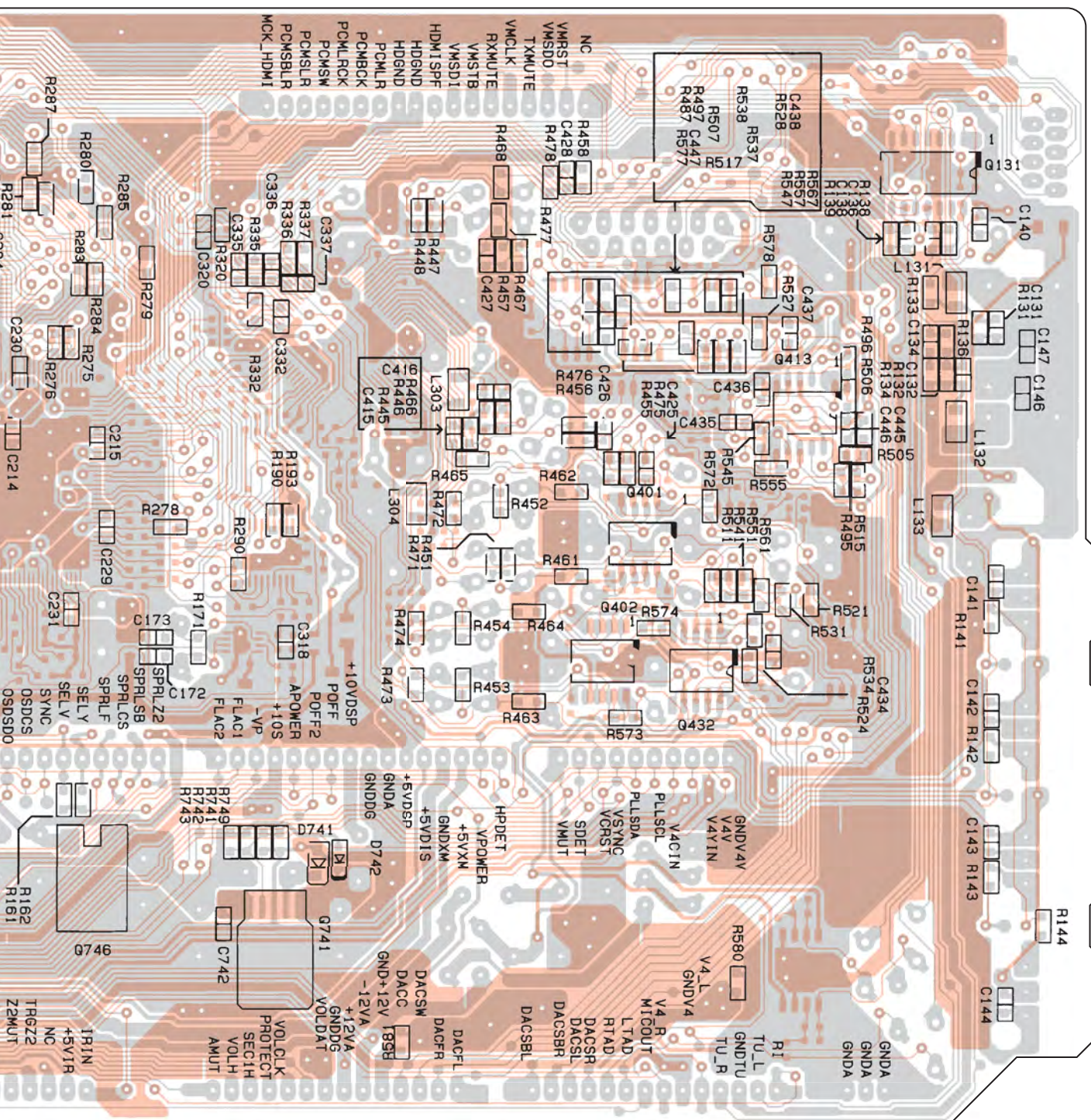
D

PRINTED CIRCUIT BOARD VIEWS-7

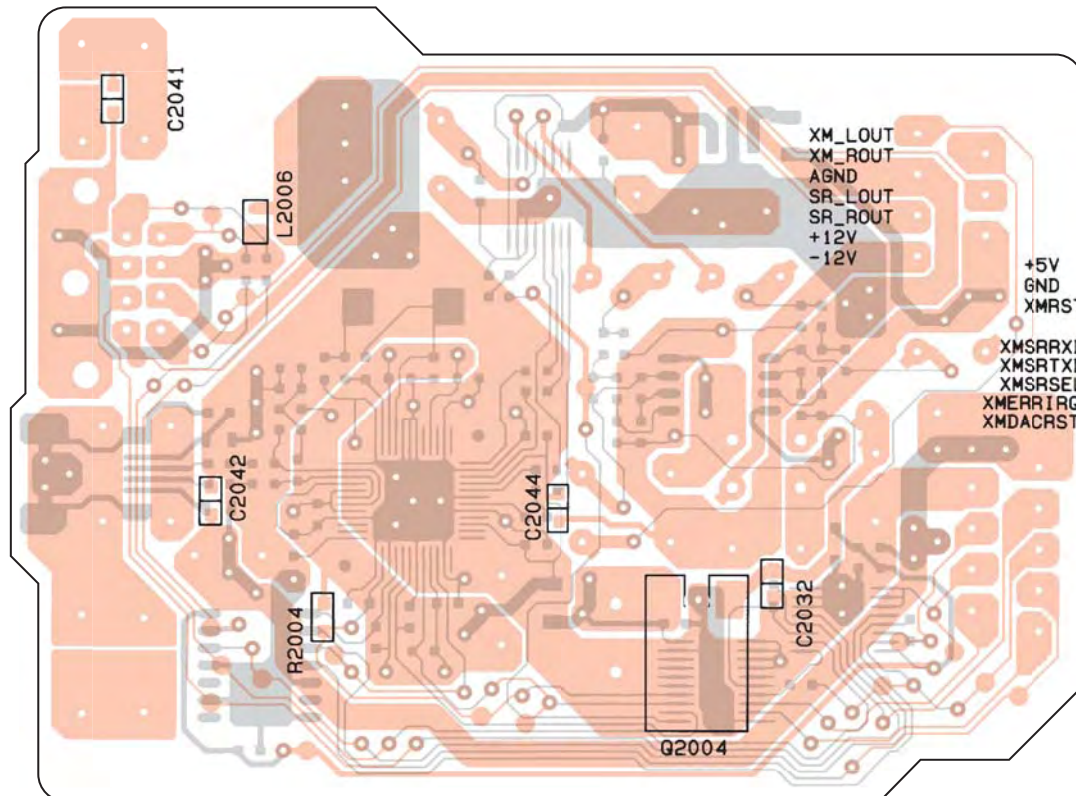
U12 DSP PC BOARD
(NADG-8816)

Soldering Side

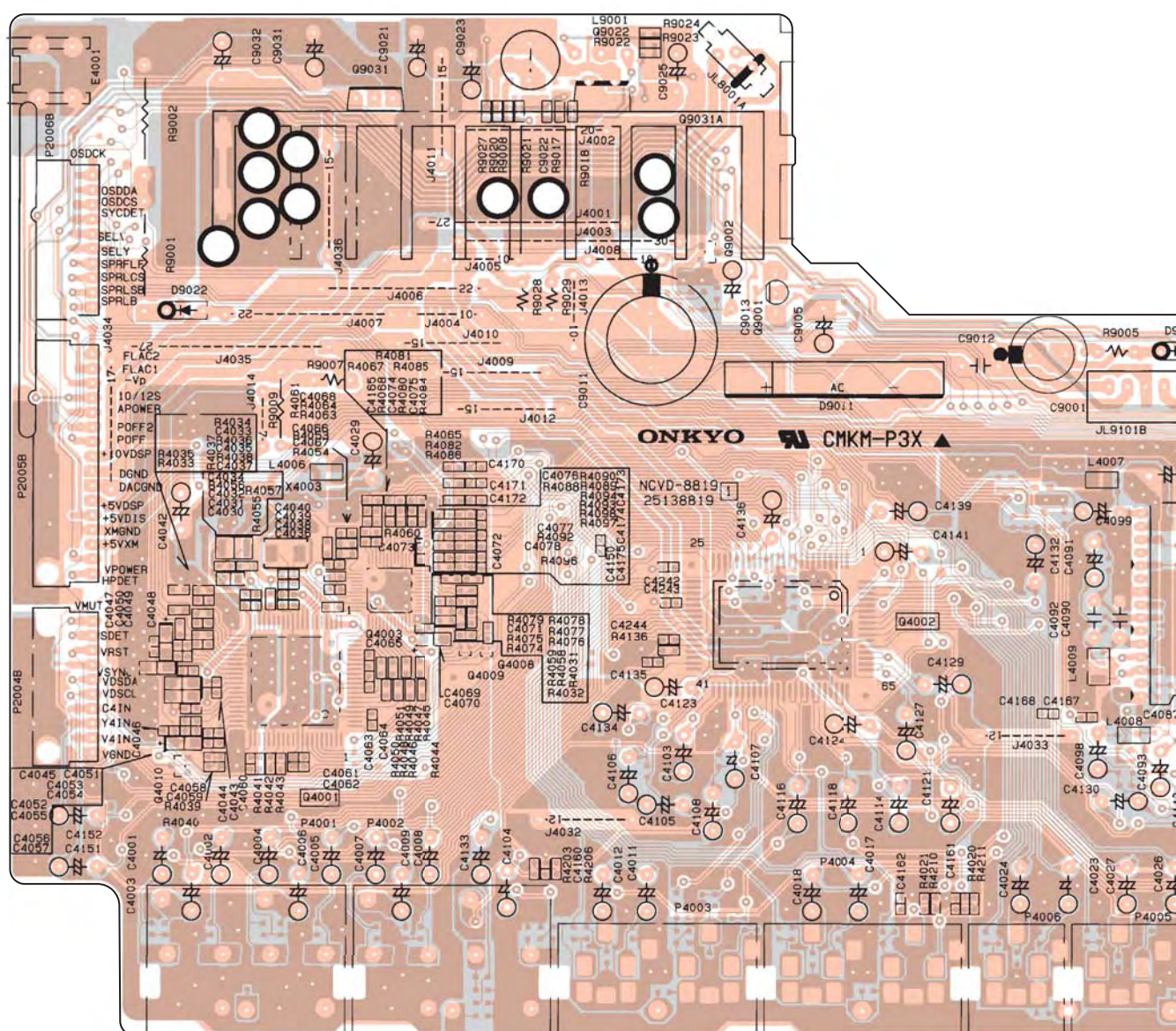


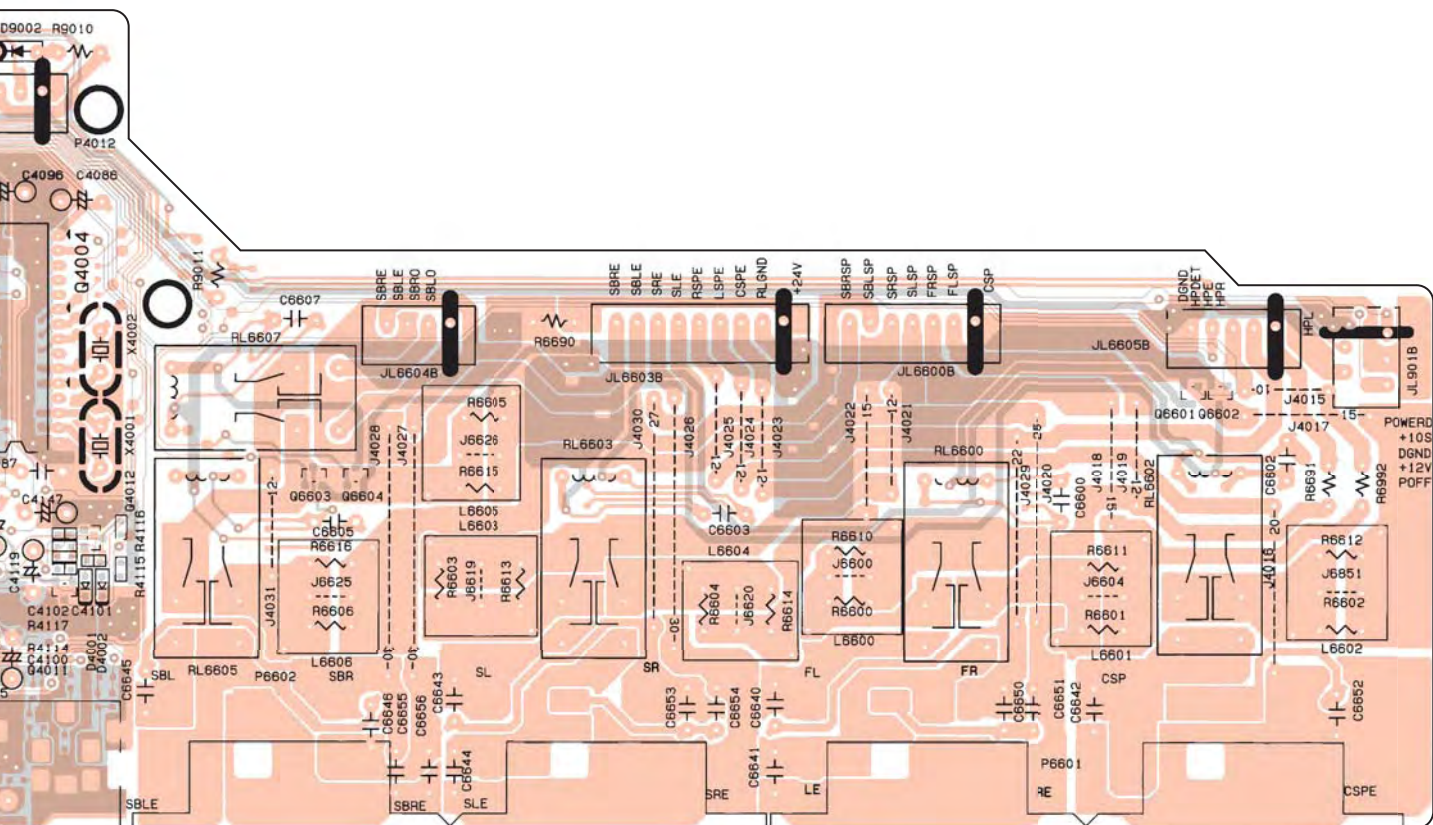


Component Side

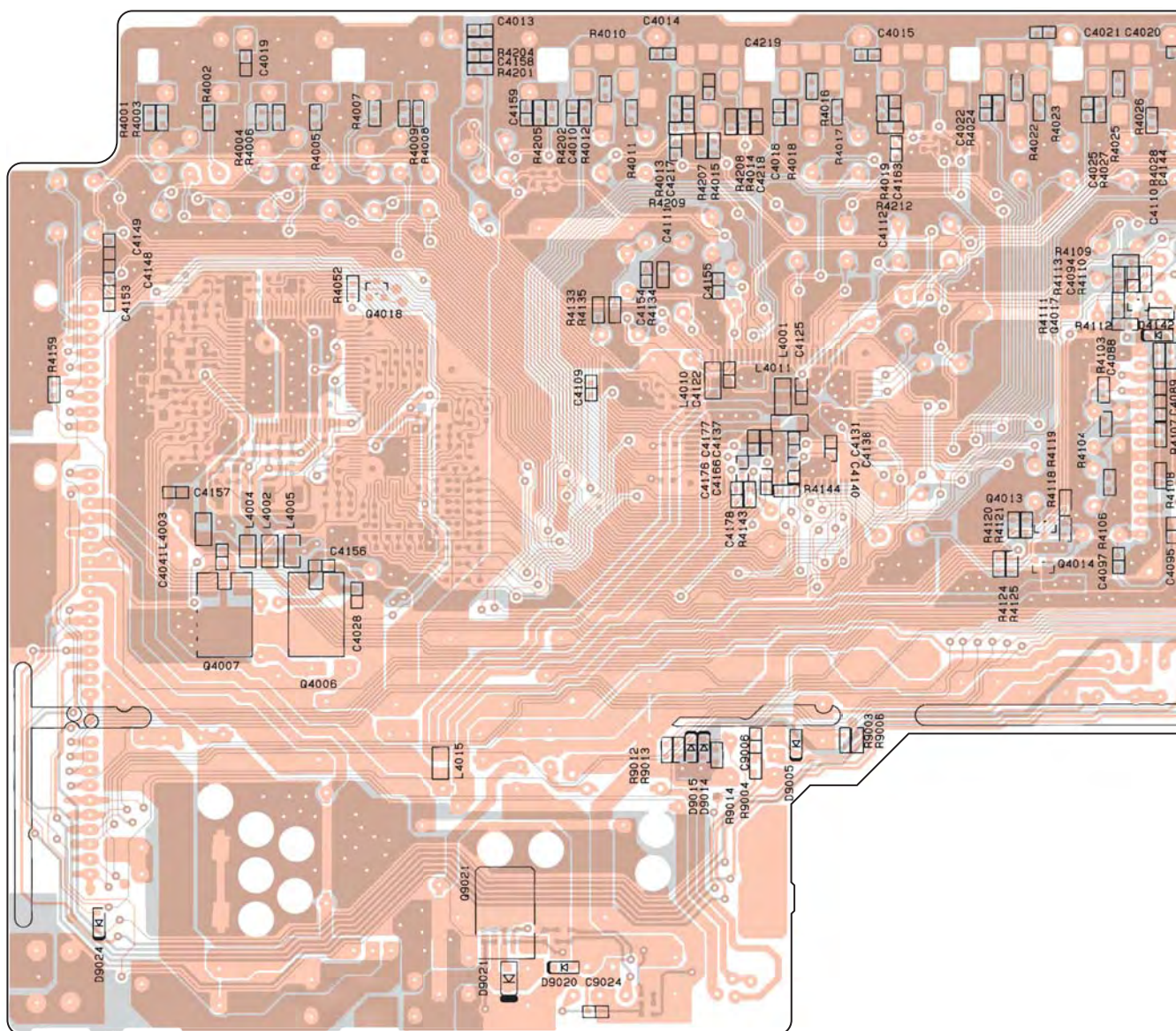


Component Side

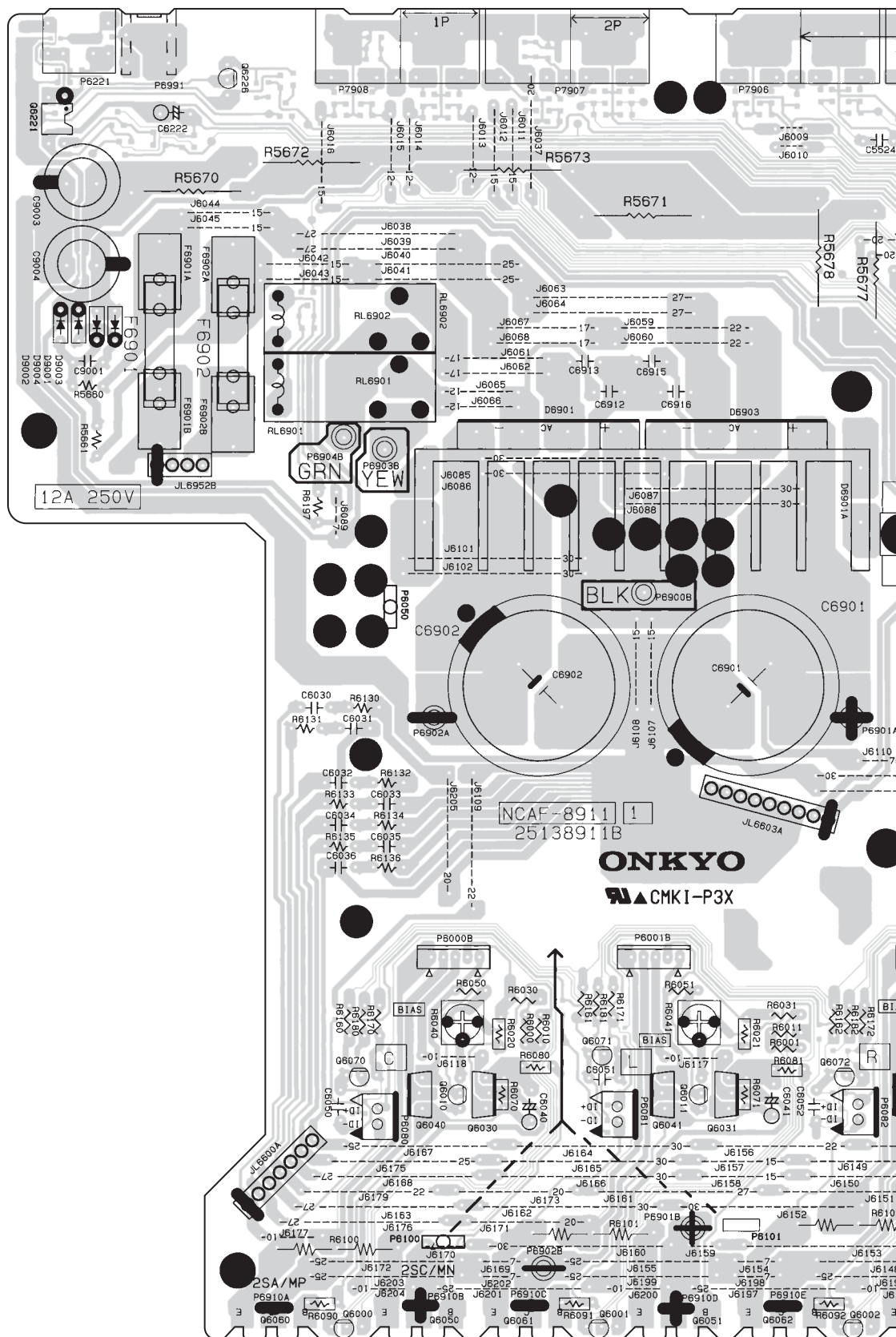


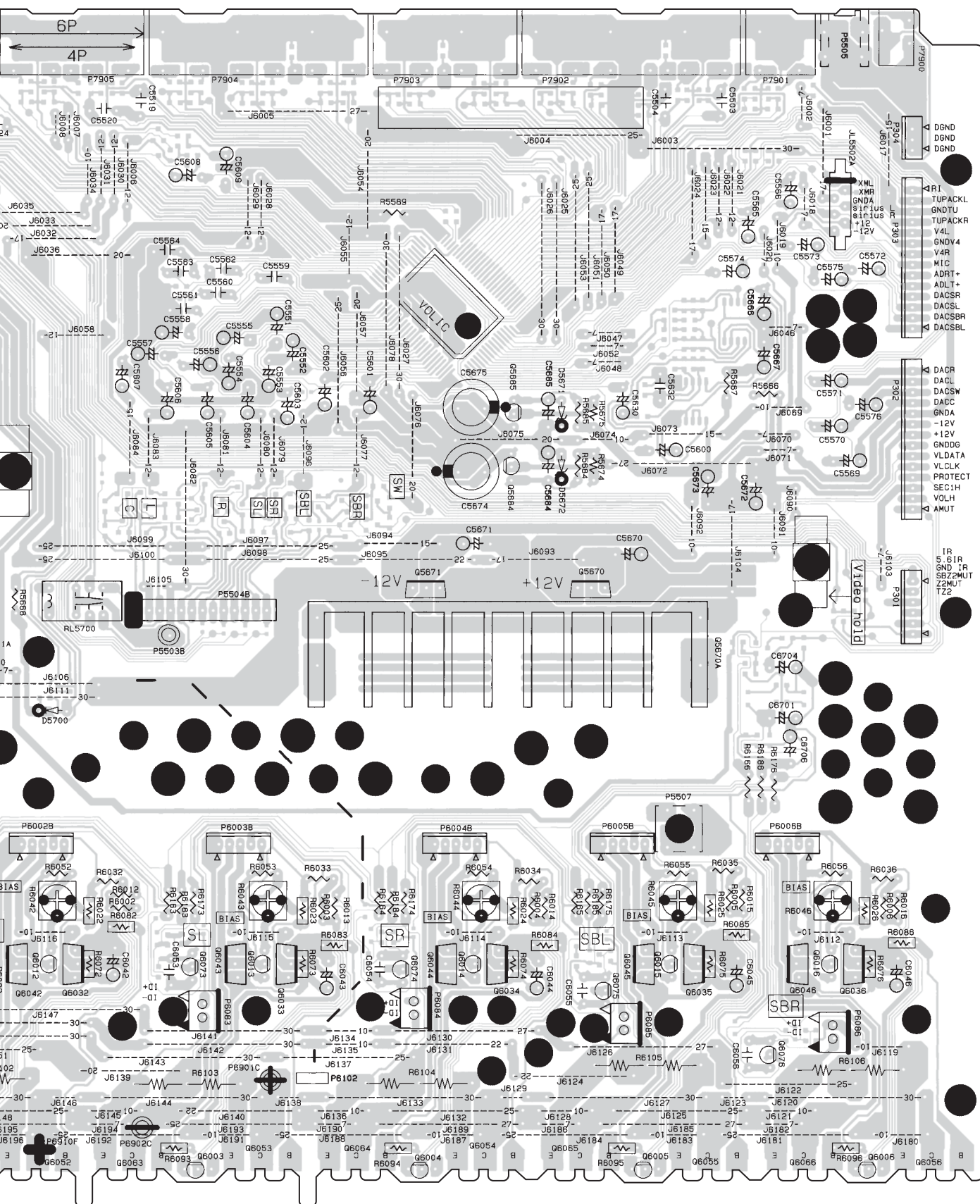


U14 VIDEO PC BOARD (NAVD-8819) Soldering Side



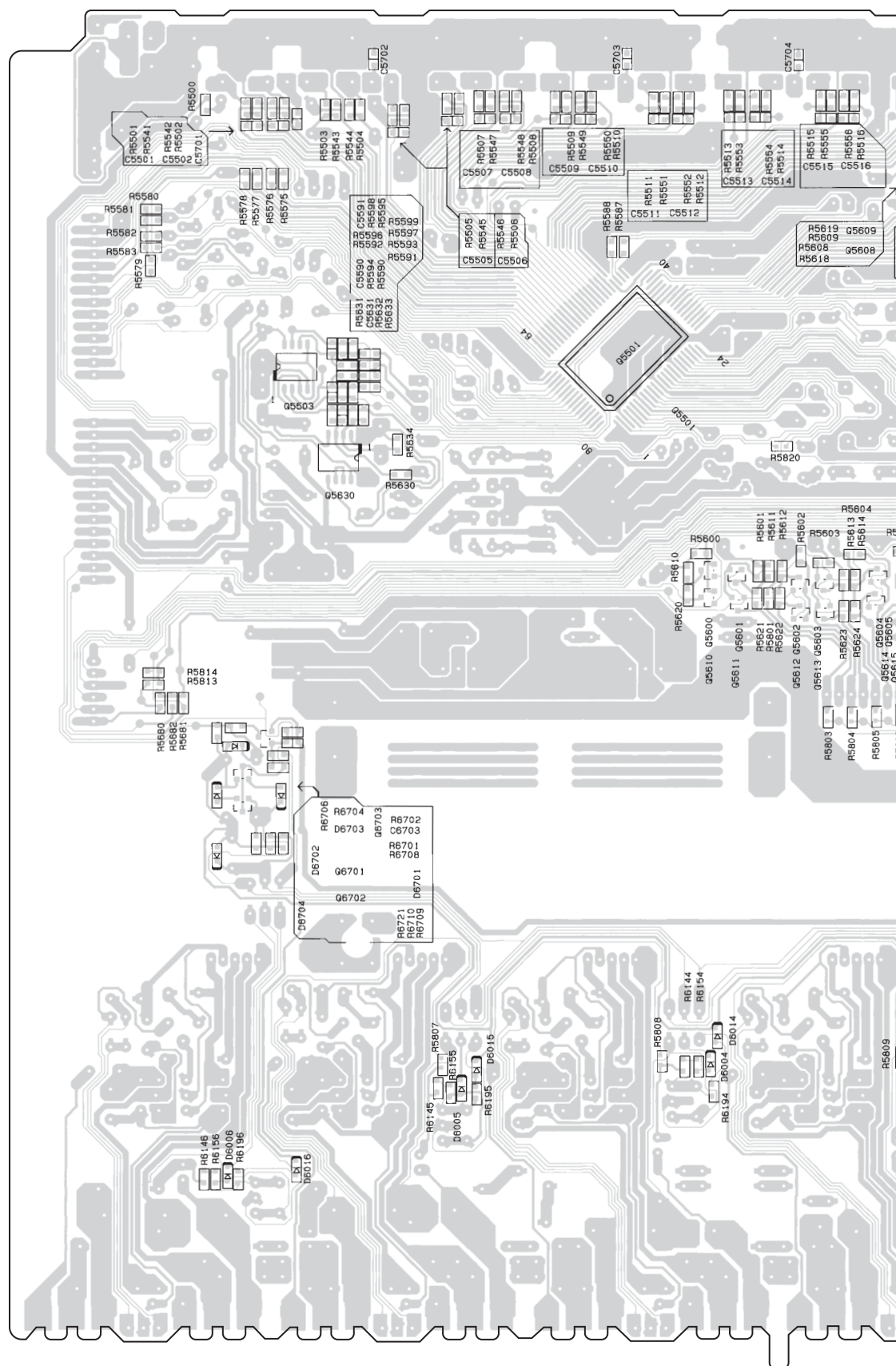
U15 AMPLIFIER PC BOARD
(NAAF-8911)
Component Side





Soldering Side

5

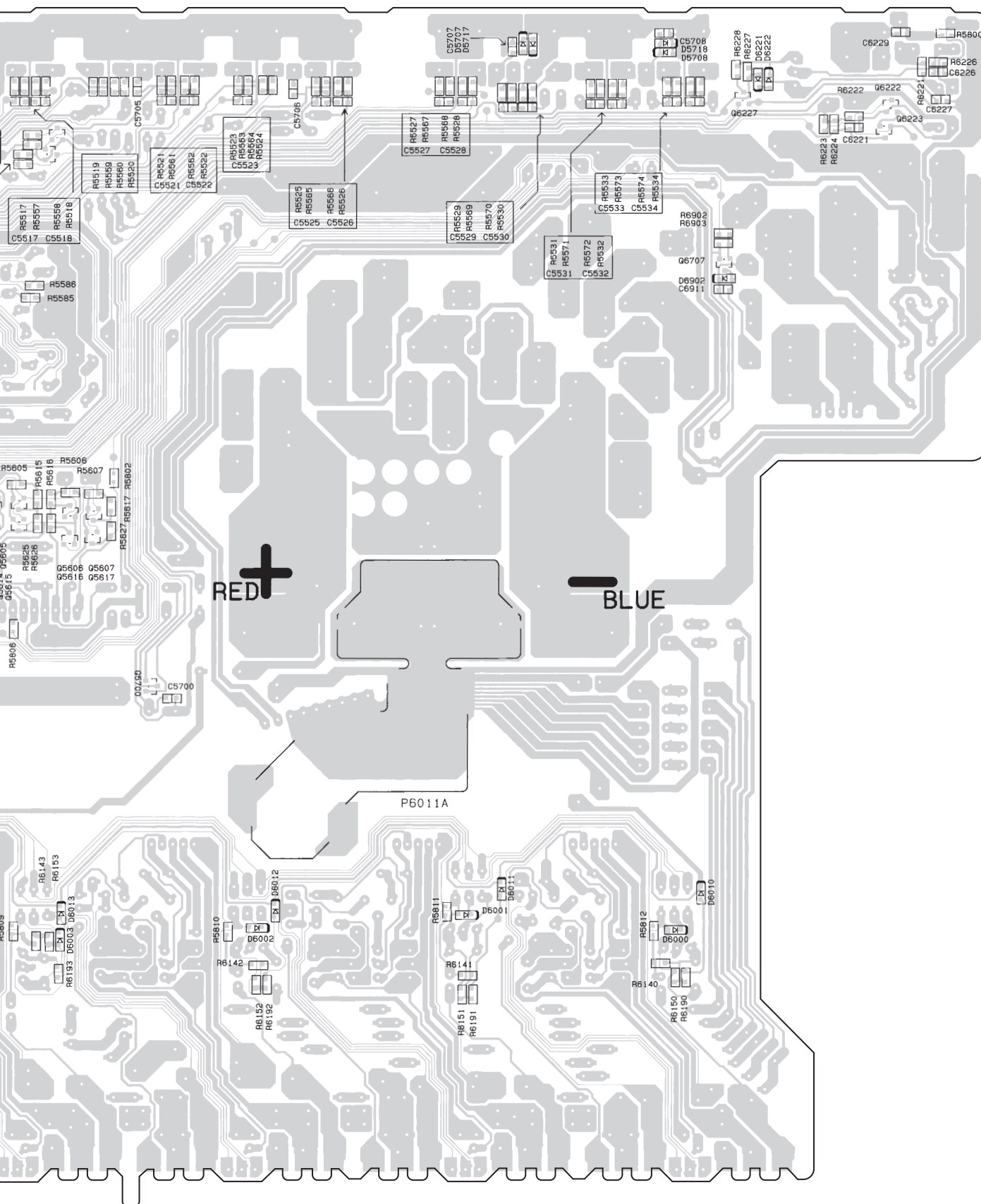


E

F

G

H



A

B

C

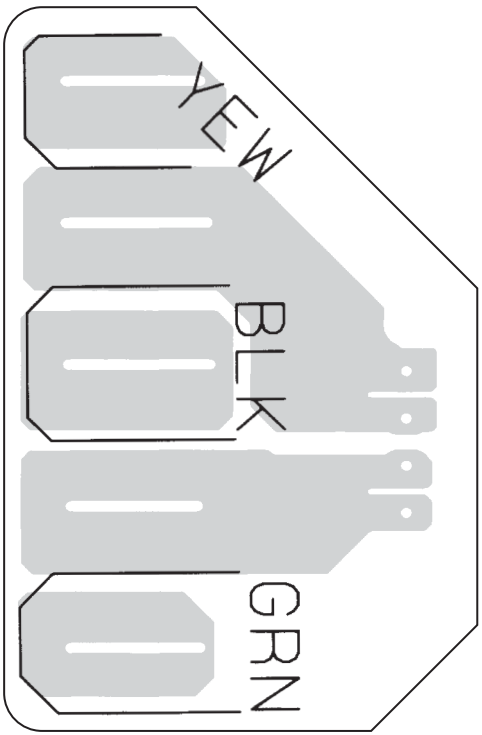
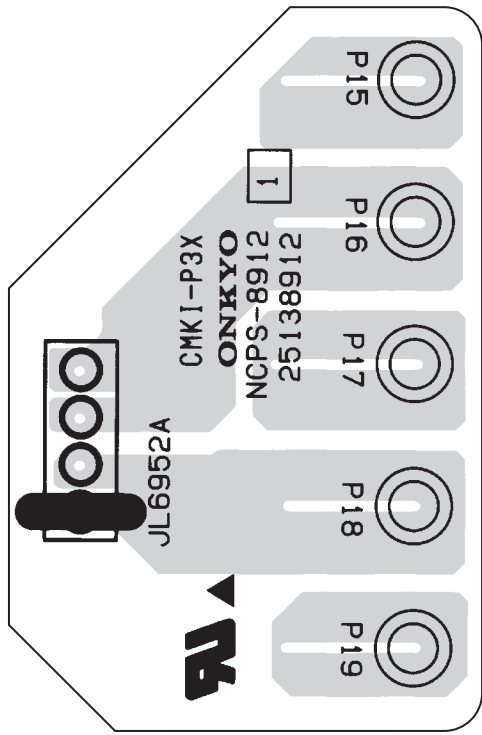
D

PRINTED CIRCUIT BOARD VIEWS-13

U16 SEC. TERMINAL-2 PC BOARD
(NAPS-8912)

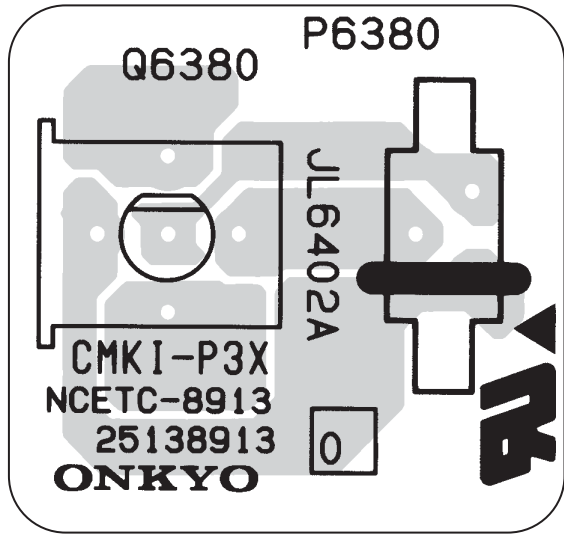
Component Side

Soldering Side



U17 THERMAL SENSOR PC BOARD
(NAETC-8913)

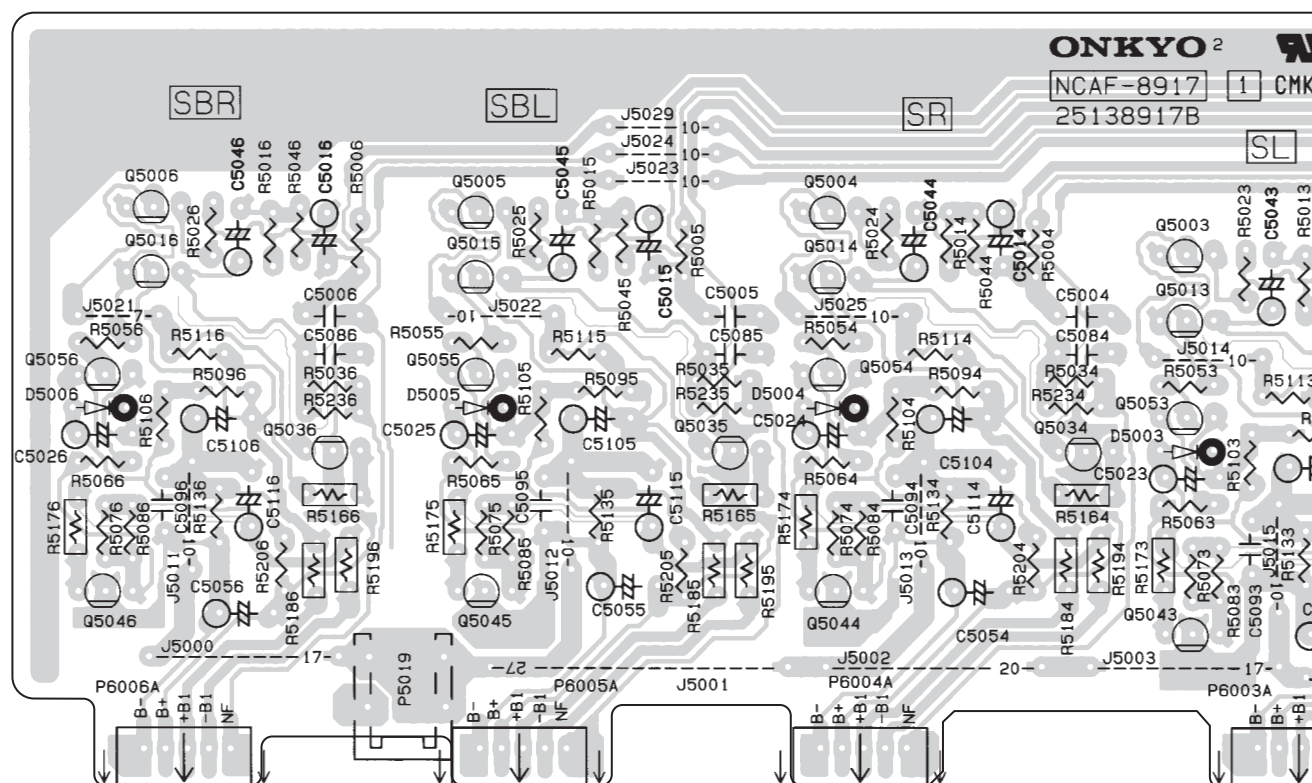
Component Side



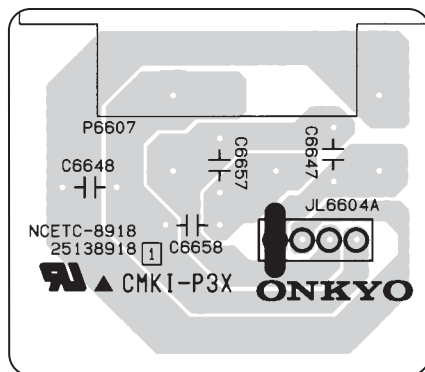
PRINTED CIRCUIT BOARD VIEWS-14

U19 DRIVER AMPLIFIER PC BOARD
(NAAF-8917)

Component Side

**U20 SPEAKER TERMINAL PC BOARD**
(NAETC-8918)

Component Side

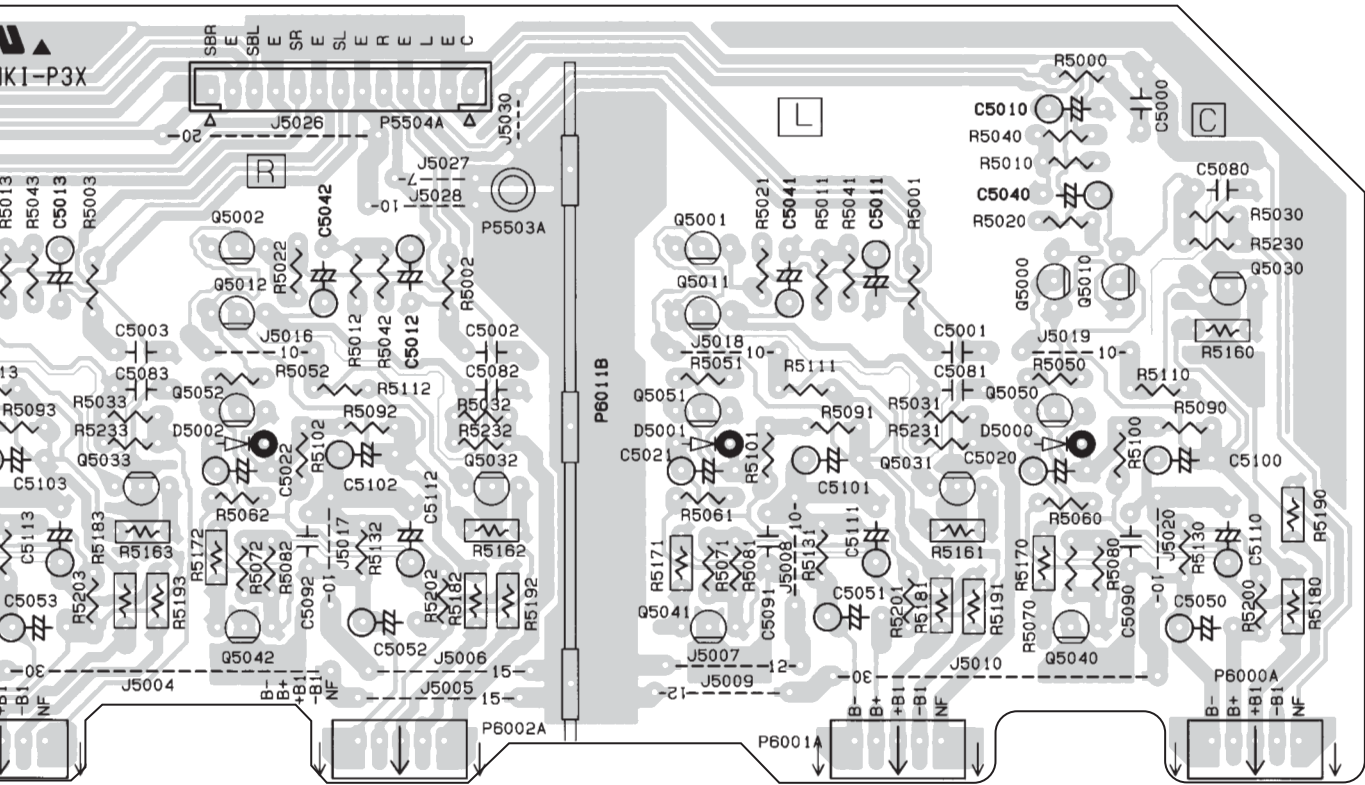


E

F

G

H



A

B

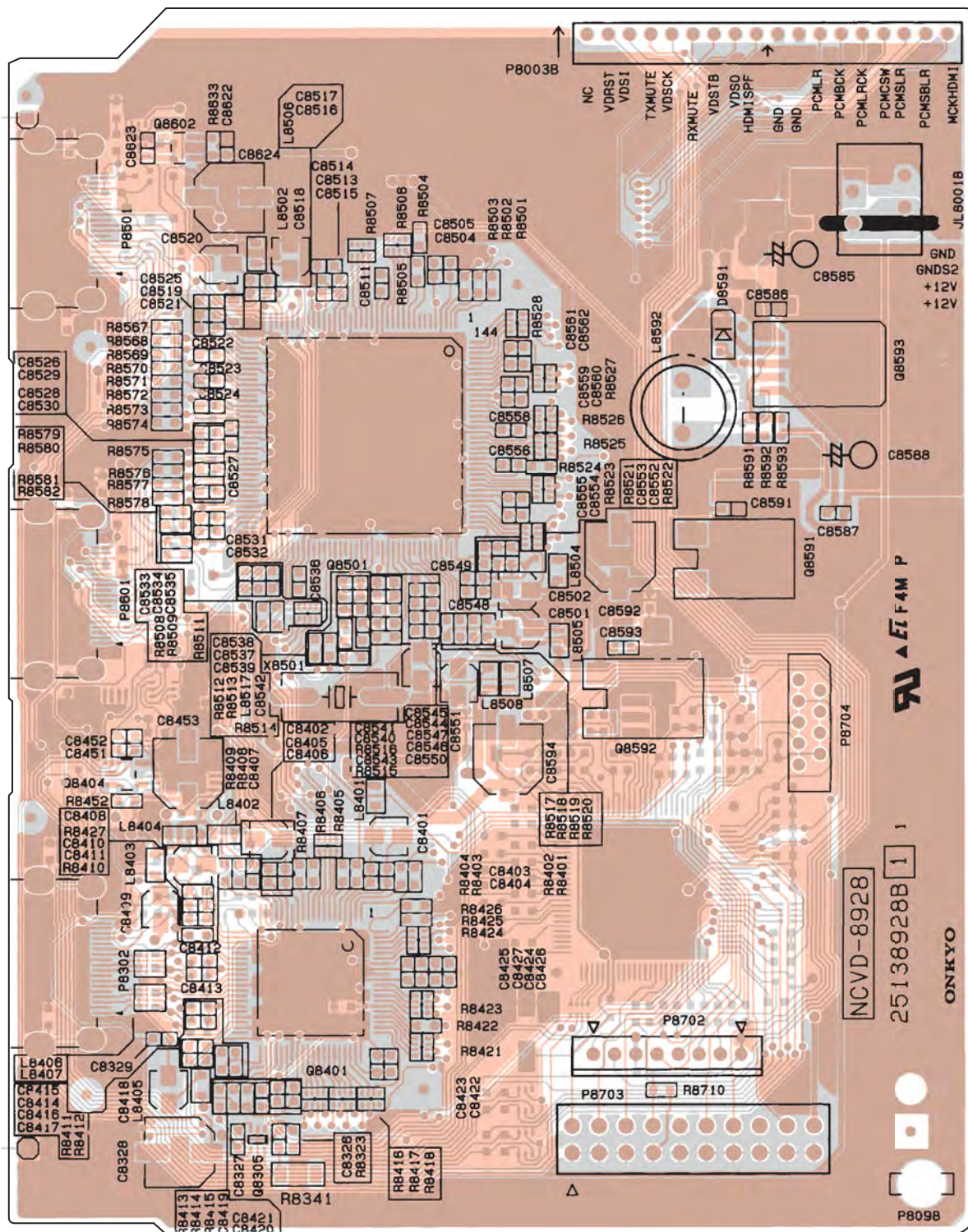
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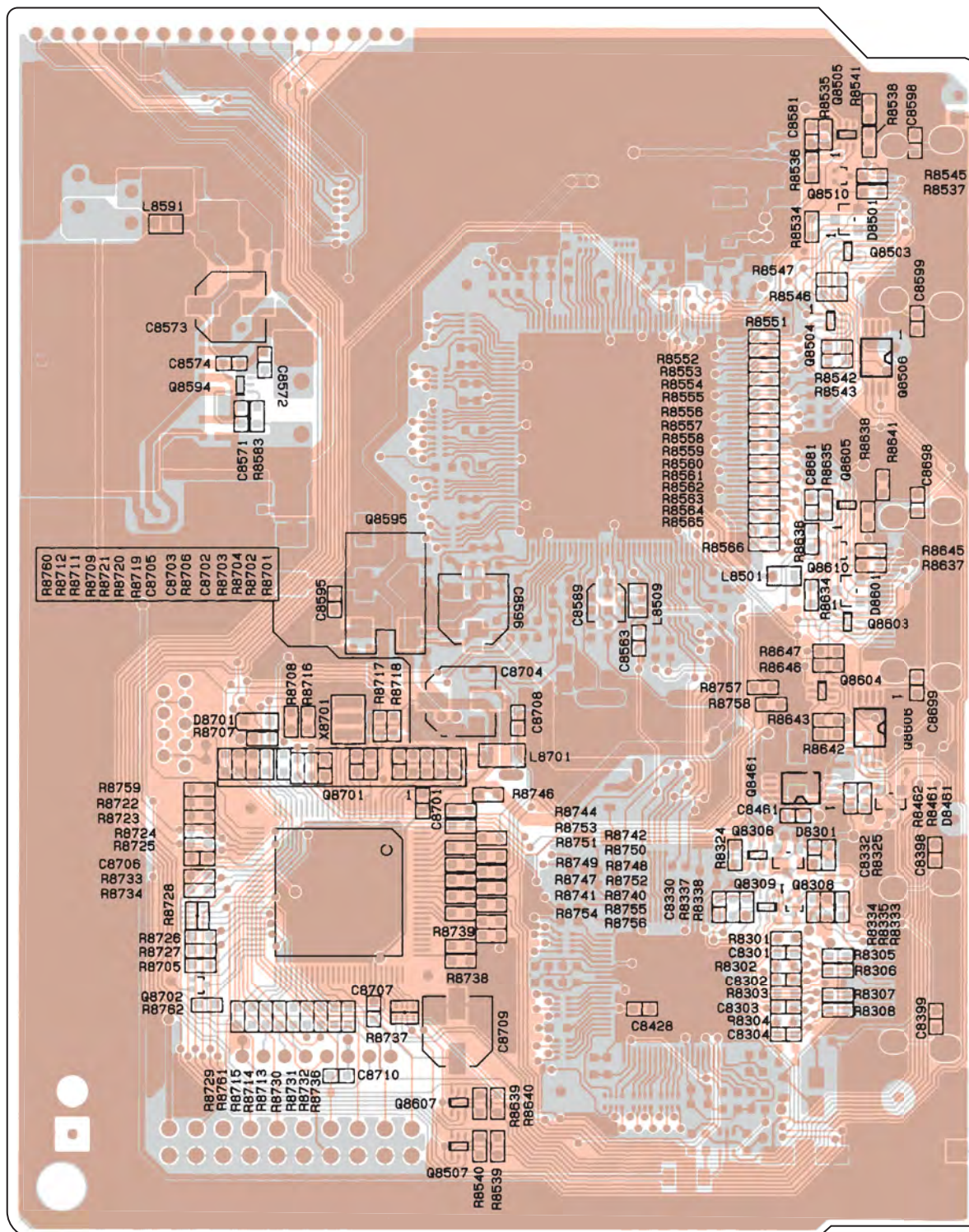
D

PRINTED CIRCUIT BOARD VIEWS-15

U21 HDMI PC BOARD
(NAVD-8928)

Component Side

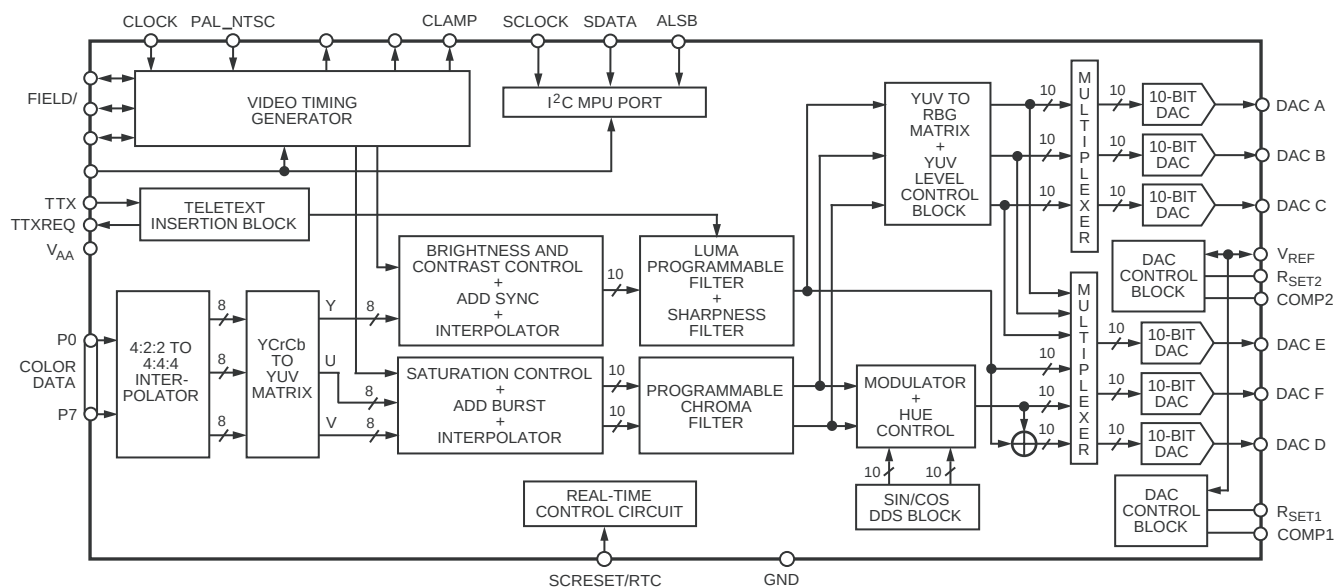




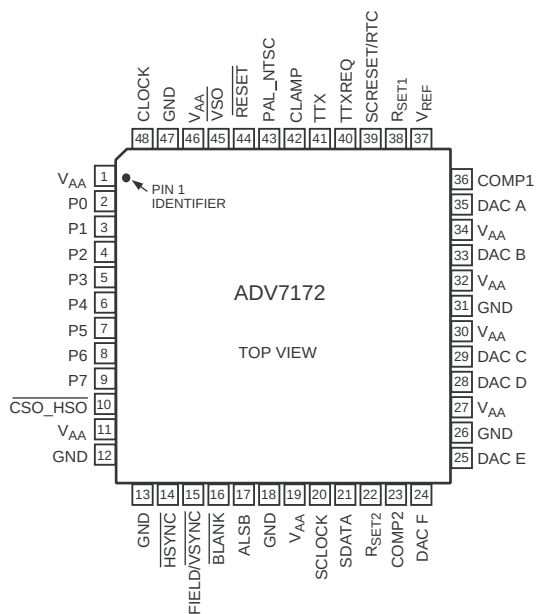
IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -1

Q4003: ADV7172 (Digital PAL/NTSC Video Encoder with six DACs)

BLOCK DIAGRAM



PIN CONFIGURATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -2

Q4003: ADV7172 (Digital PAL/NTSC Video Encoder with six DACs)

TERMINAL DESCRIPTION

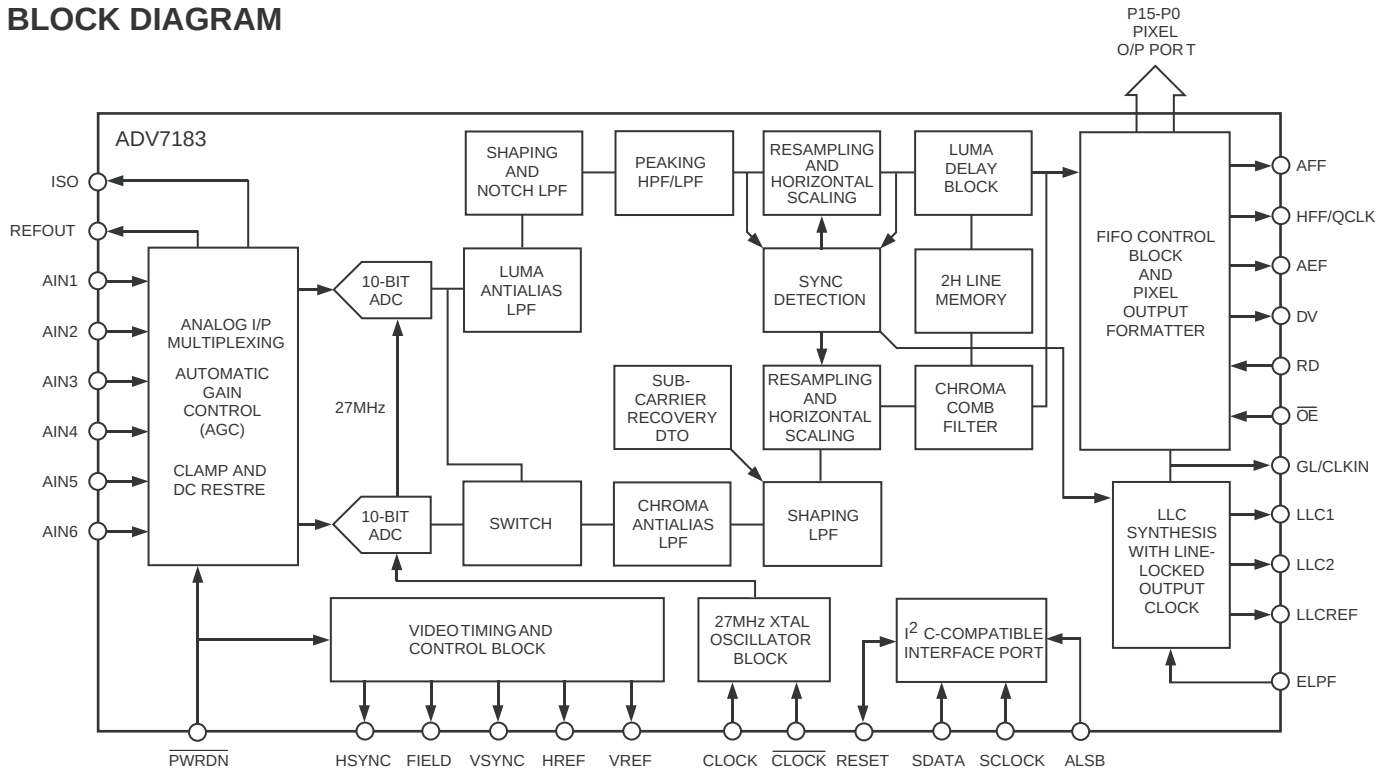
Mnemonic	Input/Output	Function
P7–P0	I	8-Bit 4:2:2 Multiplexed YCrCb Pixel Port (P7ÐP0) P0 represents the LSB.
CLOCK	I	TTL Clock Input. Requires a stable 27 MHz reference clock for standard operation. Alternatively, a 24.5454 MHz (NTSC) or 29.5 MHz (PAL) can be used for square pixel operation.
$\overline{\text{HSYNC}}$	I/O	$\overline{\text{HSYNC}}$ (Modes 1 and 2) Control Signal. This pin may be configured to output (Master Mode) or as an input and accept (Slave Mode) Sync signals.
$\overline{\text{FIELD/VSYNC}}$	I/O	Dual Function $\overline{\text{FIELD}}$ (Mode 1) and $\overline{\text{VSYNC}}$ (Mode 2) Control Signal. This pin may be configured to output (Master Mode) or as an input (Slave Mode) and accept these control signals.
$\overline{\text{BLANK}}$	I/O	Video Blanking Control Signal. The pixel inputs are ignored when this is Logic Level "0." This signal is optional.
SCRESET/RTC	I	This pin can be configured as an input by setting MR42 and MR41 of Mode Register 4. It can be configured as a subcarrier reset pin, in which case a low-to-high transition on this pin will reset the subcarrier phase to Field 0. Alternatively it may be configured as a Real-Time Control (RTC) Input.
V_{REF}	I/O	Voltage Reference Input for DACs or Voltage Reference Output (1.235 V).
R_{SET1}	I	A 150 Ω resistor connected from this pin to GND is used to control full-scale amplitudes of the Video Signals from DACs A, B, and C (the "large" DACs).
R_{SET2}	I	A 600 Ω resistor connected from this pin to GND is used to control full-scale amplitudes of the Video Signals from DACs D, E, and F (the "small" DACs).
COMP1	O	Compensation Pin for DACs A, B, and C. Connect a 0.1 μF Capacitor from COMP to V_{AA} . For Optimum Dynamic Performance in Low Power Mode, the value of the COMP1 capacitor can be lowered to as low as 2.2 nF.
COMP2	O	Compensation Pin for DACs D, E, and F. Connect a 0.1 μF Capacitor from COMP to V_{AA} .
DAC A	O	GREEN/Composite/Y Analog Output. This DAC is capable of providing 34.66 mA output.
DAC B	O	BLUE/S-Video Y/U Analog Output. This DAC is capable of providing 34.66 mA output.
DAC C	O	RED/S-Video C/V Analog Output. This DAC is capable of providing 34.66 mA output.
DAC D	O	GREEN/Composite/Y Analog Output. This DAC is capable of providing 8.66 mA output.
DAC E	O	BLUE/S-Video Y/U Analog Output. This DAC is capable of providing 8.66 mA output.
DAC F	O	RED/S-Video C/V Analog Output. This DAC is capable of providing 8.66 mA output.
SCLOCK	I	MPU Port Serial Interface Clock Input.
SDATA	I/O	MPU Port Serial Data Input/Output.
CLAMP	O	TTL Output Signal to external circuitry to enable clamping of all video signals.
$\overline{\text{PAL\_NTSC}}$	I	Input signal to select PAL or NTSC mode of operation, pin set to Logic "1" selects PAL.
$\overline{\text{VSO}}$	O	$\overline{\text{VSO}}$ TTL Output Sync Signal.
$\overline{\text{CSO\_HSO}}$	O	Dual Function $\overline{\text{CSO}}$ or $\overline{\text{HSO}}$ TTL Output Sync Signal.
$\overline{\text{ALSB}}$	I	TTL Address Input. This signal sets up the LSB of the MPU address.
RESET	I	The input resets the on-chip timing generator and sets the ADV7172/ADV7173 into default mode. This is NTSC operation, Timing Slave Mode 0, DACs A, B, and C powered OFF, DACs D, E, and F powered ON, Composite and S-Video out.
TTX	I	Teletext Data Input Pin.
TTXREQ	O	Teletext Data Request output signal used to control teletext data transfer.
V_{AA}	P	Power Supply (3 V to 5 V).
GND	G	Ground Pin.

IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS -3

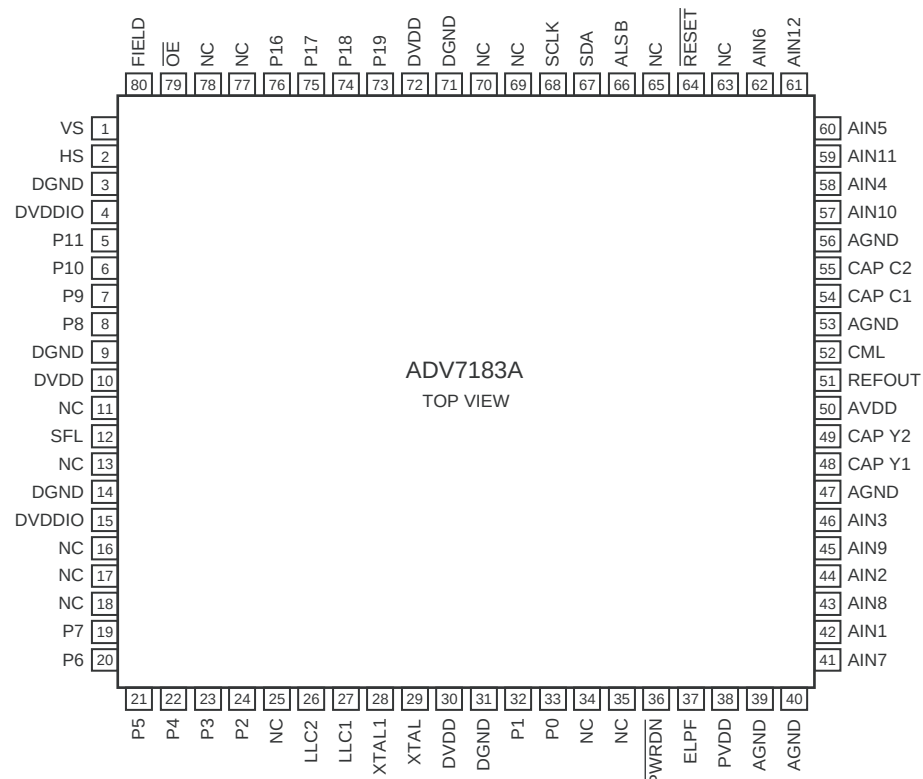
Q4001: ADV7183

(Advanced Video Decoder with 10-Bit ADC and Component Input Support)

BLOCK DIAGRAM



PIN CONFIGURATION



IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS -4

Q4001: ADV7183

(Advanced Video Decoder with 10-Bit ADC and Component Input Support)

TERMINAL DESCRIPTION (1/2)

Pin	Mnemonic	Input/Output	Function
1	VS/VACTIVE	O	VS or Vertical Sync. A dual-function pin, (OM_SEL[1:0] = 0, 0) is an output signal that indicates a vertical sync with respect to the YUV pixel data. The active period of this signal is six lines of video long. The polarity of the VS signal is controlled by the PVS bit. VACTIVE (OM_SEL[1:0] = 1, 0 or 0, 1) is an output signal that is active during the active/viewable period of a video field. The polarity of VACTIVE is controlled by PVS bit.
2	HS/HACTIVE	O	HS or Horizontal Sync. A dual-function pin, (OM_SEL[1:0] = 0, 0) is a programmable horizontal sync output signal. The rising and falling edges can be controlled by HSB[9:0] and HSE[9:0] in steps of 2 LLC1. The polarity of the HS signal is controlled by the PHS bit. HACTIVE (OM_SEL[1:0] = 1, 0 or 0, 1) is an output signal that is active during the active/viewable period of a video line. The active portion of a video line is programmable on the ADV7183. The polarity of HACTIVE is controlled by PHS bit.
3, 14	DVSSIO	G	Digital I/O Ground
4, 15	DVDDIO	P	Digital I/O Supply Voltage (3.3 V)
5-8, 19-24, 32, 33, 73-76	P15-P0	O	Video Pixel Output Port. 8-bit multiplexed YCrCb pixel port (P15-P8), 16-bit YCrCb pixel port (P15-P8 = Y and P7-P0 = Cb,Cr).
9, 31, 71	DVSS1-3	G	Ground for Digital Supply
10, 30, 72	DVDD1-3	P	Digital Supply Voltage (3.3 V)
11	AFF	O	Almost Full Flag. A FIFO control signal indicating when the FIFO has reached the almost full margin set by the user (use FFM[4:0]). The polarity of this signal is controlled by the PFF bit.
12	HFF/QCLK/GL	I/O	Half Full Flag. A multifunction pin, (OM_SEL[1:0] = 1, 0) is a FIFO control signal that indicates when the FIFO is half full. The QCLK (OM_SEL[1:0] = 0, 1) pin function is a qualified pixel output clock when using FIFO SCAPI mode. The GL (OM_SEL[1:0] = 0, 0) function (Genlock output) is a signal that contains a serial stream of data that contains information for locking the subcarrier frequency. The polarity of HFF signal is controlled by PFF bit.
13	AEF	O	Almost Empty Flag. A FIFO control signal, it indicates when the FIFO has reached the almost empty margin set by the user (use FFM[4:0]). The polarity of this signal is controlled by PFF bit.
16	CLKIN	I	Asynchronous FIFO Clock. This asynchronous clock is used to output data onto the P19-P0 bus and other control signals.
17, 18, 34, 35	GPO[3:0]	O	General-Purpose Outputs controlled via I ² C
25	LLCREF	O	Clock Reference Output. This is a clock qualifier distributed by the internal CGC for a data rate of LLC2. The polarity of LLCREF is controlled by the PLLCREF bit.
26	LLC2	O	Line-Locked Clock System Output Clock/2 (13.5 MHz)
27	LLC1/PCLK	O	Line-Locked Clock System Output Clock. A dual-function pin (27 MHz $\pm$ 5%) or a FIFO output clock ranging from 20 MHz to 35 MHz.
28	XTAL1	O	Second terminal for crystal oscillator; not connected if external clock source is used.
29	XTAL	I	Input terminal for 27MHz crystal oscillator or connection for external oscillator with CMOS-compatible square wave clock signal
36	$\overline{\text{PWRDN}}$	I	Power-Down Enable. A logical low will place part in a power-down status.
37	ELPF	I	This pin is used for the External Loop Filter that is required for the LLC PLL.
38	PVDD	P	
39	PVSS	G	

IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS -5

Q4001: ADV7183

(Advanced Video Decoder with 10-Bit ADC and Component Input Support)

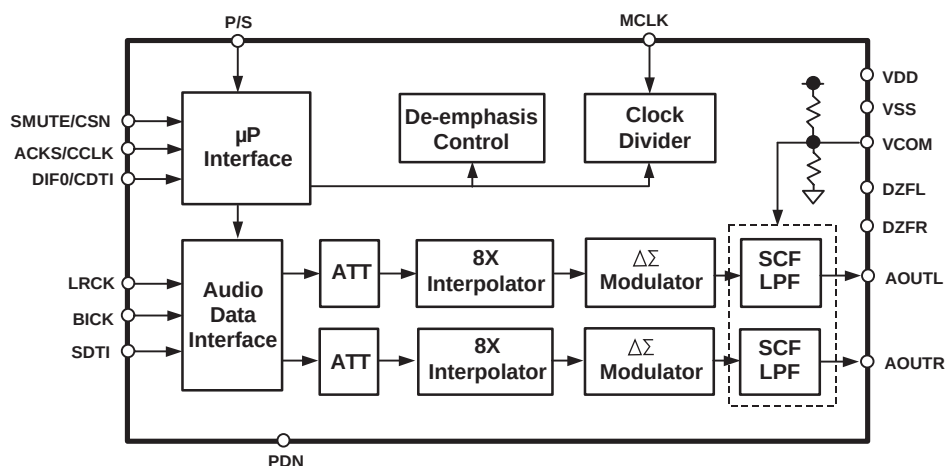
TERMINAL DESCRIPTION (2/2)

Pin	Mnemonic	Input/Output	Function
40, 47, 53, 56, 63	AVSS	G	Ground for Analog Supply
41, 43, 45, 57, 59, 61	AVSS1-6	G	Analog Input Channels. Ground if single-ended mode is selected. These pins should be connected directly to REFOUT when differential mode is selected.
42, 44, 46, 58, 60, 62	AIN1-6	I	Video Analog Input Channels
48, 49	CAPY1-2	I	ADC Capacitor Network
50	AVDD	P	Analog Supply Voltage (5 V)
51	REFOUT	O	Internal Voltage Reference Output
52	CML	O	Common-Mode Level for ADC
54, 55	CAPC1-2	I	ADC Capacitor Network
64	$\overline{\text{RESET}}$	I/O	System Reset Input. Active Low.
65	ISO	I	Input Switch Over. A low to high transition on this input indicates to the decoder core that the input video source has been changed externally and configures the decoder to reacquire the new timing information of the new source. This is useful in applications where external video muxes are used. This input gives the advantage of faster locking to the external muxed video sources. A low to high transition triggers this input.
66	ALSB	I	TTL Address Input. Selects the MPU address: MPU address = 88h ALSB = 0, disables I ² C filter MPU address = 8Ah ALSB = 1, enables I ² C filter
67	SDATA	I/O	MPU Port Serial Data Input/Output
68	SCLK	I	MPU Port Serial Interface Clock Input
69	VREF/ $\overline{\text{VRESET}}$	O	VREF or Vertical Reference Output Signal. Indicates start of next field. $\overline{\text{VRESET}}$ or Vertical Reset Output is a signal that indicates the beginning of a new field. In SCAPI/CAPI mode this signal is one clock wide and active low relative to CLKIN. It immediately follows the $\overline{\text{HRESET}}$ pixel, and indicates that the next active pixel is the first active pixel of the next field.
70	HREF/ $\overline{\text{HRESET}}$	O	HREF or Horizontal Reference Output Signal. A dual-function pin (enabled when Line-Locked Interface is selected, OM_SEL[1:0] = 0,0), this signal is used to indicate data on the YUV output. The positive slope indicates the beginning of a new active line; HREF is always 720 Y samples long. $\overline{\text{HRESET}}$ or Horizontal Reset Output (enabled when SCAPI or CAPI is selected, OM_SEL[1:0] = 0, 1 or 1, 0) is a signal that indicates the beginning of a new line of video. In SCAPI/CAPI this signal is one clock cycle wide and is output relative to CLKIN. It immediately follows the last active pixel of a line. The polarity is controlled via PHVR.
77	RD	I	Asynchronous FIFO Read Enable Signal. A logical high on this pin enables a read from the output of the FIFO.
78	DV	O	DV or Data Valid Output Signal. In SCAPI/CAPI mode, DV performs to functions, depending on whether SCAPI or CAPI is selected. It toggles high when the FIFO has reached the AFF margin set by the user, and remains high until the FIFO is empty. The alternative mode is where it can be used to control FIFO reads for bursting information out of the FIFO. In API mode DV indicates valid data in the FIFO, which includes both pixel information and control codes. The polarity of this pin is controlled via PDV.
79	OE	I	Output Enable Controls Pixel Port Outputs. A logic high will three-state P19-P0.
80	FIELD	O	ODD/EVEN Field Output Signal. An active state indicates that an even field is being digitized. The polarity of this signal is controlled by the PF bit.

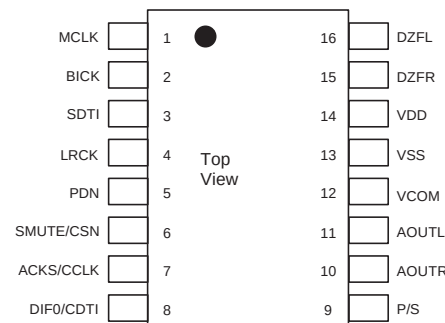
IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -6

Q2002: AK4384 (192kHz 24-Bit 2ch DAC)

BLOCK DIAGRAM



PIN CONFIGURATION



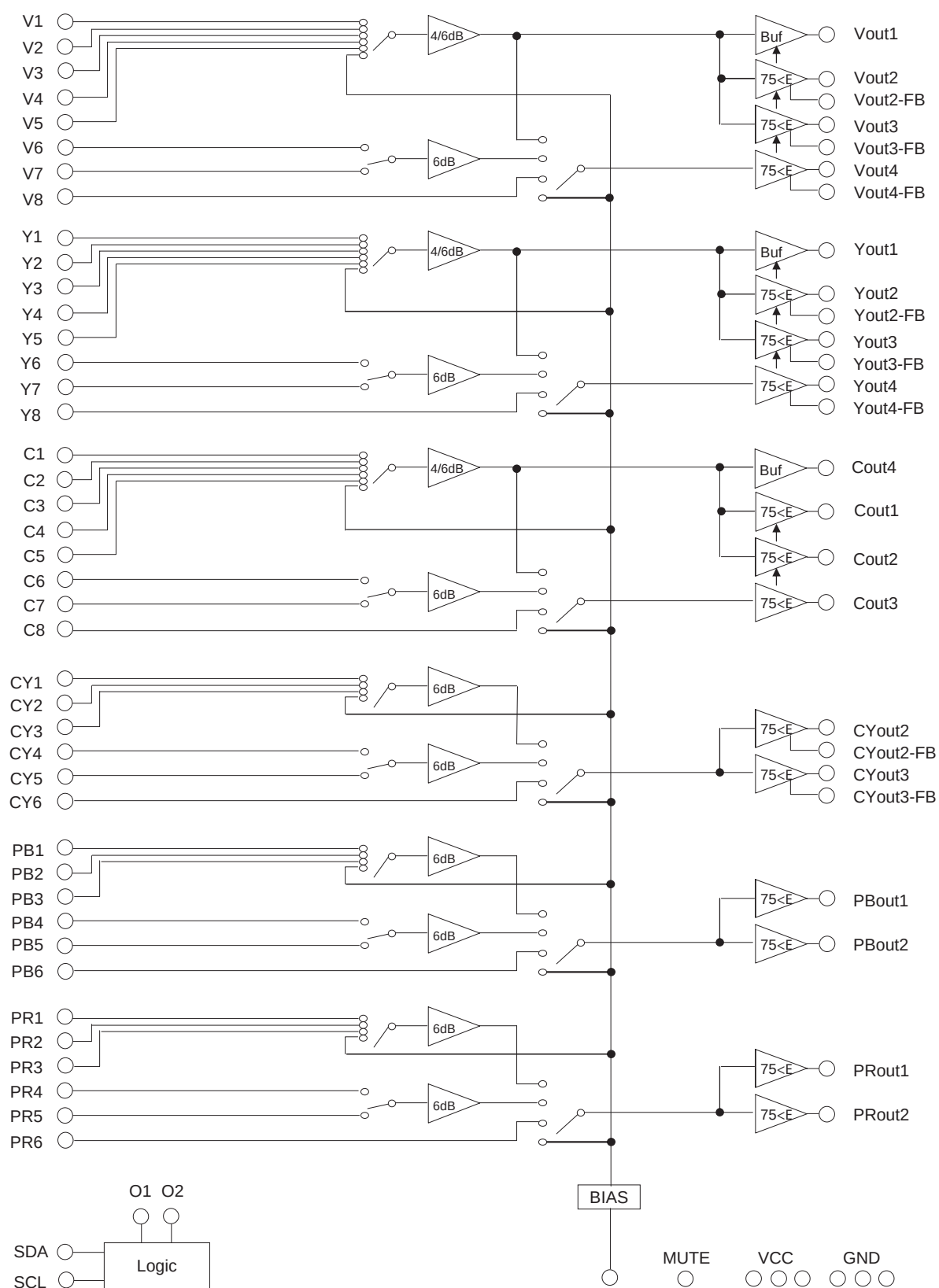
TERMINAL DESCRIPTION

No.	Pin Name	I/O	Function
1	MCLK	I	Master Clock Input Pin An external TTL clock should be input on this pin.
2	BICK	I	Audio Serial Data Clock Pin
3	SDTI	I	Audio Serial Data Input Pin
4	LRCK	I	L/R Clock Pin
5	PDN	I	Power -Down Mode Pin When at "L", the AK4384 is in the power-down mode and is held in reset. The AK4384 should always be reset upon power-up.
6	SMUTE	I	Soft Mute Pin in parallel mode "H": Enable, "L": Disable
	CSN	I	Chip Select Pin in serial mode
7	ACKS	I	Auto Setting Mode Pin in parallel mode "L": Manual Setting Mode, "H": Auto Setting Mode
	CCLK	I	Control Data Clock Pin in serial mode
8	DIF0	I	Audio Data Interface Format Pin in parallel mode
	CDTI	I	Control Data Input Pin in serial mode
9	P/S	I	Parallel/Serail Select Pin (Internal pull-up pin) "L": Serial control mode, "H": Parallel control mode
10	AOUTR	O	Rch Analog Output Pin
11	AOUTL	O	Lch Analog Output Pin
12	VCOM	O	Common Voltage Pin, VDD/2 Normally connected to VSS with a 0.1mF ceramic capacitor in parallel with a 10 m F electrolytic cap.
13	VSS	-	Ground Pin
14	VDD	-	Power Supply Pin
15	DZFR	O	Rch Data Zero Input Detect Pin
16	DZFL	O	Lch Data Zero Input Detect Pin

IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS -7

Q4002: AN15881A (Video SW for TV with Multi-signal 14 Inputs and 4 Outputs)

BLOCK DIAGRAM



IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS -8

Q4002: AN15881A (Video SW for TV with Multi-signal 14 Inputs and 4 Outputs)

TERMINAL DESCRIPTION (1/3)

Pin No.	Pin name	Type	Description
1	Y3	In	Luminance signal input 3
2	Y4	In	Luminance signal input 4
3	Y5	In	Luminance signal input 5
4	Y6	In	Luminance signal input 6
5	Y7	In	Luminance signal input 7
6	Y8	In	Luminance signal input 8
7	VCC1	Power supply	5.0V power supply
8	C1	In	Chrominance signal input 1
9	C2	In	Chrominance signal input 2
10	C3	In	Chrominance signal input 3
11	C4	In	Chrominance signal input 4
12	C5	In	Chrominance signal input 5
13	GND1	Ground	Ground
14	C6	In	Chrominance signal input 6
15	C7	In	Chrominance signal input 7
16	C8	In	Chrominance signal input 8
17	BIAS	Output	Bias voltage
18	CY1	In	CY1 signal input
19	CY2	In	CY2 signal input
20	CY3	In	CY3 signal input
21	CY4	In	CY4 signal input
22	CY5	In	CY5 signal input
23	CY6	In	CY6 signal input
24	PB1	In	PB1 signal input
25	PB2	In	PB2 signal input
26	PB3	In	PB3 signal input
27	PB4	In	PB4 signal input
28	PB5	In	PB5 signal input
29	PB6	In	PB6 signal input
30	PR1	In	PR1 signal input
31	PR2	In	PR2 signal input
32	PR3	In	PR3 signal input
33	PR4	In	PR4 signal input
34	PR5	In	PR5 signal input
35	PR6	In	PR6 signal input

IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS -9

Q4002: AN15881A (Video SW for TV with Multi-signal 14 Inputs and 4 Outputs)

TERMINAL DESCRIPTION (2/3)

Pin No.	Pin name	Type	Description
36	MUTE	In	Mute control pin
37	PROUT2	Out	PROUT2 signal output
38	O1	Out	General output 1
39	PROUT1	Out	PROUT1 signal output
40	O2	Out	General output 2
41	PBOUT2	Out	PBOUT2 signal output
42	PBOUT1	Out	PBOUT1 signal output
43	GND2	Ground	Ground
44	CYOUT3-FB	In	CYOUT3 feedback input
45	CYOUT3	Out	CYOUT3 signal output
46	CYOUT2-FB	In	CYOUT2 feedback input
47	CYOUT2	Out	CYOUT2 signal output
48	COUT4	Out	COUT4 signal output
49	VCC2	Power supply	5.0V power supply
50	COUT3	Out	COUT3 signal output
51	COUT2	Out	COUT2 signal output
52	COUT1	Out	COUT1 signal output
53	GND3	Ground	Ground
54	YOUT4-FB	In	YOUT4 feedback input
55	YOUT4	Out	YOUT4 signal output
56	YOUT3-FB	In	YOUT3 feedback input
57	YOUT3	Out	YOUT3 signal output
58	YOUT2-FB	In	YOUT2 feedback input
59	YOUT2	Out	YOUT2 signal output
60	YOUT1	Out	YOUT1 signal output
61	VCC3	Power supply	5.0V power supply
62	VOUT4-FB	In	VOUT4 feedback input
63	VOUT4	Out	VOUT4 signal output
64	SDA	In	I ² C bus data input
65	VOUT3-FB	In	VOUT3 feedback input
66	VOUT3	Out	VOUT3 signal output
67	VOUT2-FB	In	VOUT2 feedback input
68	VOUT2	Out	VOUT2 signal output
69	VOUT1	Out	VOUT1 signal output
70	SCL	In	I ² C bus clock input

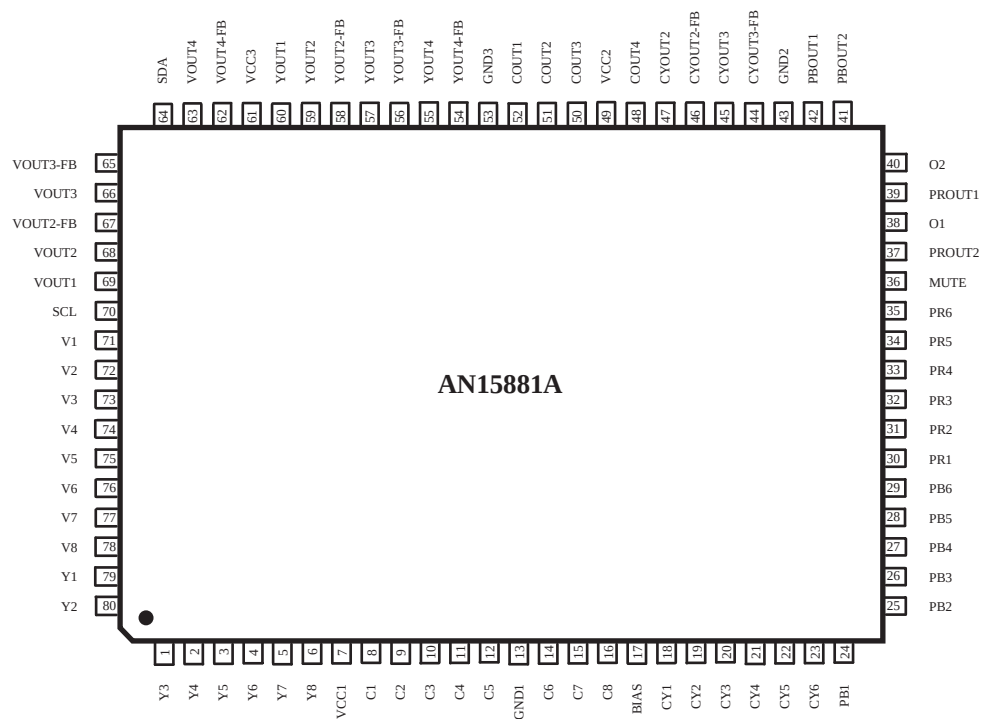
IC BLOCK DIA GRAM AND TERMINAL DESCRIPTIONS -10

Q4002: AN15881A (Video SW for TV with Multi-signal 14 Inputs and 4 Outputs)

TERMINAL DESCRIPTION (3/3)

Pin No.	Pin name	Type	Description
71	V1	In	Video composite signal input 1
72	V2	In	Video composite signal input 2
73	V3	In	Video composite signal input 3
74	V4	In	Video composite signal input 4
75	V5	In	Video composite signal input 5
76	V6	In	Video composite signal input 6
77	V7	In	Video composite signal input 7
78	V8	In	Video composite signal input 8
79	Y1	In	Luminance signal input 1
80	Y2	In	Luminance signal input 2

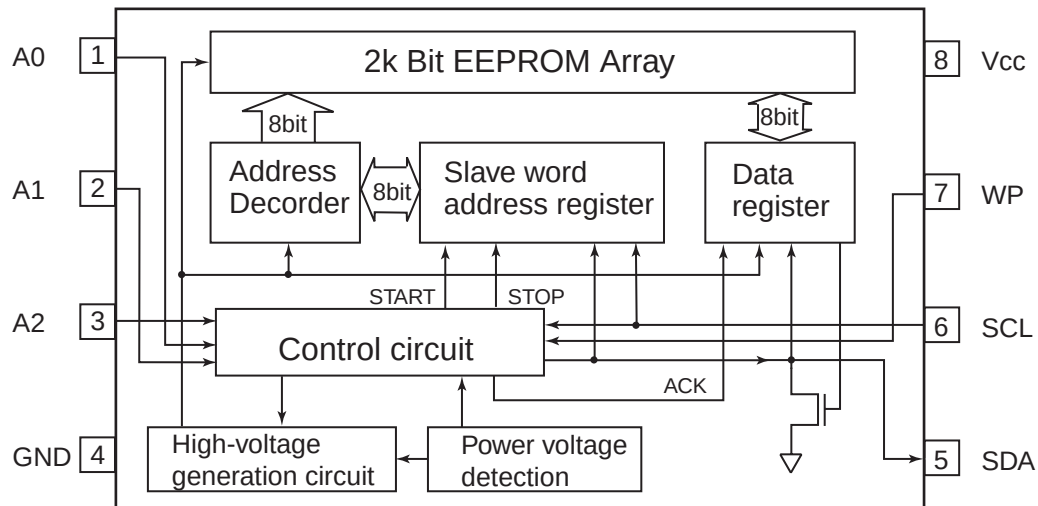
PIN CONFIGURATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -11

Q8506,Q8606: BR24L02FV-W(256X8 bit EEPROM)

BLOCK DIAGRAM AND PIN CONFIGURATION



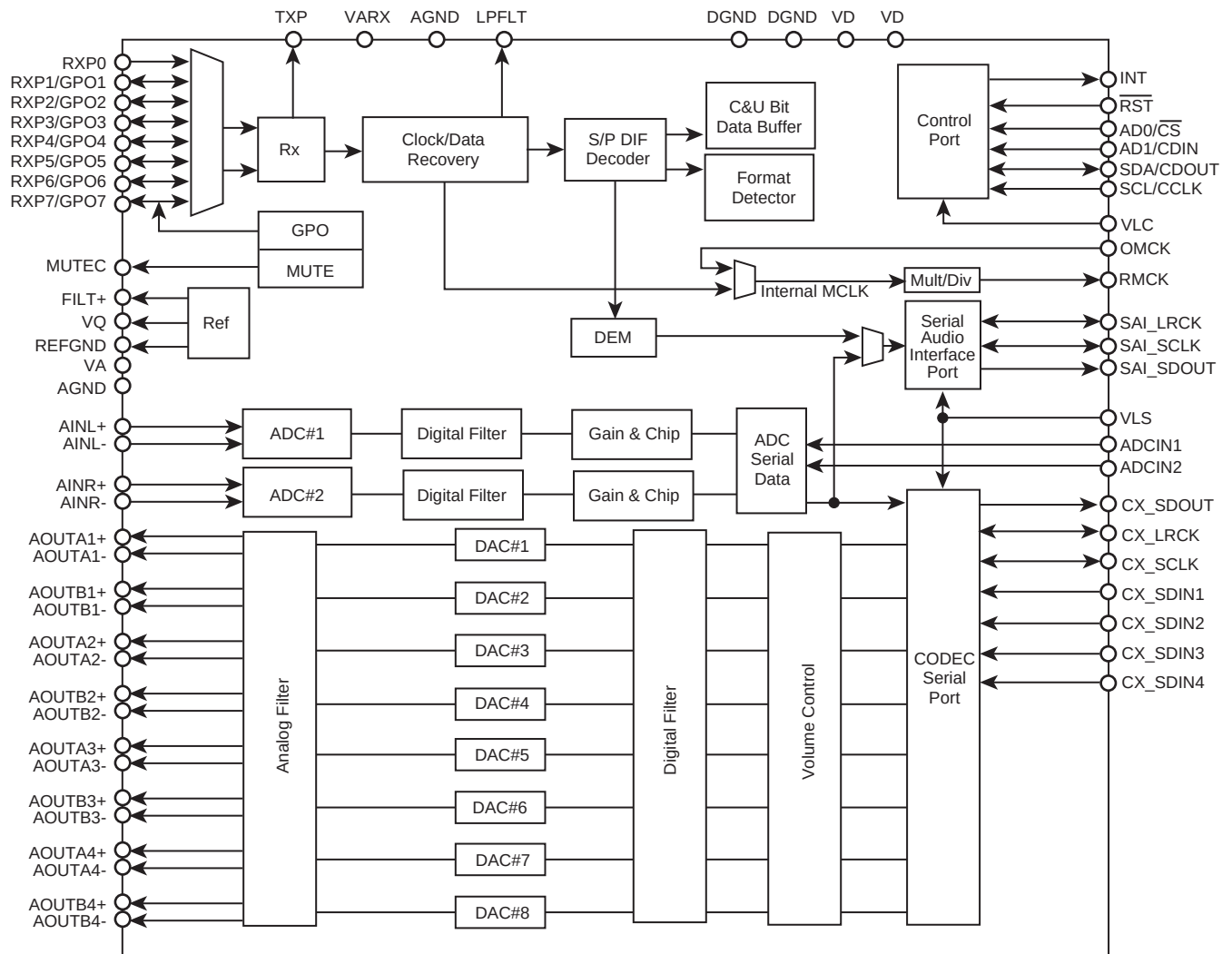
TERMINAL DESCRIPTION

Terminal	I/O	Function
Vcc	-	Apply a power source.
GND	-	Ground terminal
A0,A1,A2	I	Slave address setting terminal
SCL	I	Serial clock input
SDA	I/O	Slave and word address. Serial data input and output
WP	I	Write protect terminal

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -12

Q301 : CS42518 (8-Ch Codec with S/PDIF Receiver)

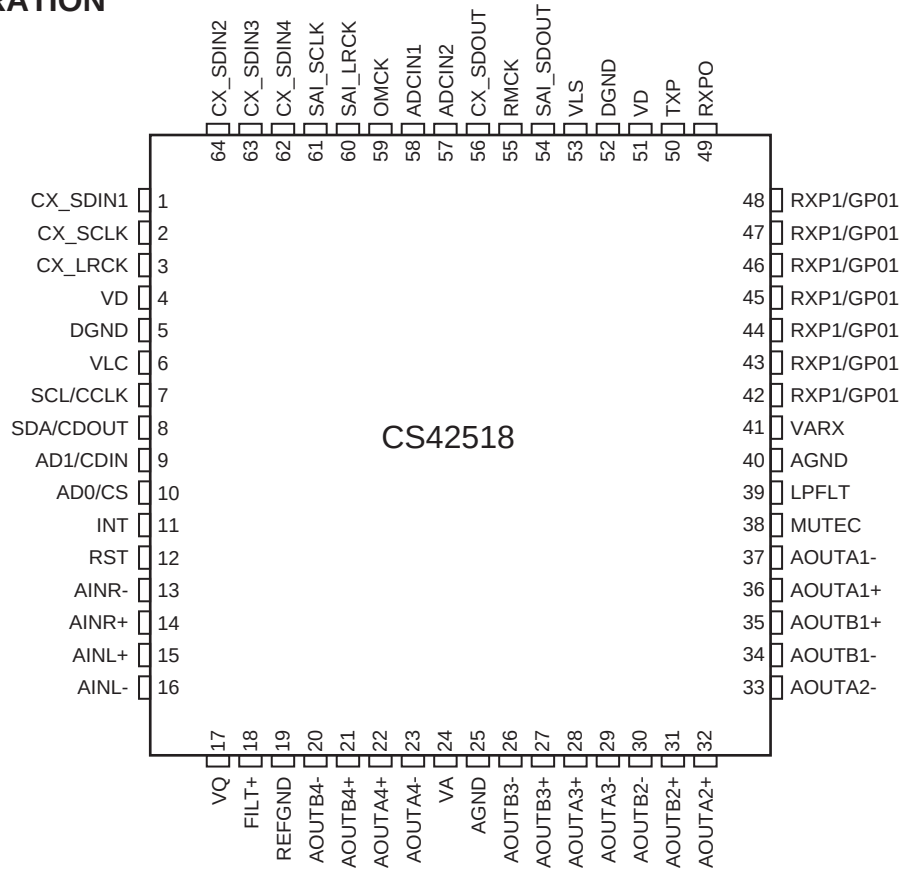
BLOCK DIAGRAM



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -13

Q301 : CS42518 (8-Ch Codec with S/PDIF Receiver)

PIN CONFIGURATION



TERMINAL DESCRIPTION (1/3)

Pin Name	#	Pin Description
CX_SDIN1	1	Codec Serial Audio Data Input (Input) - Input for two's complement serial audio data.
CX_SDIN2	64	
CX_SDIN3	63	
CX_SDIN4	62	
CX_SCLK	2	CODEC Serial Clock (Input/Output) - Serial clock for the CODEC serial audio interface
CX_LRCK	3	CODEC Left Right Clock (Input/ Output) - Determines which channel, Left or Right, is currently active on the CODEC serial audio data line.
VD	4	Digital Power (Input) - Positive power supply for the digital section.
	51	
DGND	5	Digital Ground (Input) - Ground reference. Should be connected to digital ground.
	52	
VLC	6	Control Port Power (Input) - Determines the required signal level for the control port.
SCL/CCLK	7	Serial Control Port Clock (Input) - Serial clock for the serial control port. Requires an external pull-up resistor to the logic interface voltage in I2C mode as shown in the Typical Connection Diagram.
SDA/CDOUT	8	Serial Control Data (Input/Output) - SDA is a data I/O line in IC mode and requires an external pull-up resistor to the logic interface voltage, as shown in the Typical connection Diagram. CDOUT is the output data line for the control port interface in SPI mode.
AD1/CDIN	9	Address Bit 1 (I2C)/Serial Control Data (SPI) (Input) - AD1 a chip address pin in I2C mode; CDIN is the input data line for control port interface in SPI mode.

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -14

Q301 : CS42518 (8-Ch Codec with S/PDIF Receiver)

TERMINAL DESCRIPTION (2/3)

Pin Name	#	Pin Description
AD0/CS	10	Address Bit 0 (I2C)/Control Port Chip Select (SPI) (INput) - AD0 is a chip address pin in I2C mode; CS is the chip select signal in SPI mode.
INT	11	Interrupt (Ountput) - The CS42518 will generate an interrupt condition as per the Interrupt Mask register.
RST	12	Reset (Input) - The device enters a low power mode and all internal registers are reset to their default settings when low.
AINR- AINR+	13 14	Differential right Channel Analog Input (Input) - Signals are presented differentially to the delta-sigma modulators via the AINR+/- pins.
AINL- AINL+	15 16	Differential right Channel Analog Input (Input) - Signals are presented differentially to the delta-sigma modulators via the AINR+/- pins.
VQ	17	Quiescent Voltage (Output) - Filter connection for internal quiescent reference voltage.
FILT+	18	Positive Voltage Reference (Output) - Positive reference voltage for the internal sampling circuits.
REFGND	19	Reference Ground (Input) - Ground reference for the internal sampling circuits.
AOUTA1 +, - AOUTB1 +, - AOUTA2 +, - AOUTB2 +, - AOUTA3 +, - AOUTB3 +, - AOUTA4 +, - AOUTB4 +, -	36, 37 35, 34 32, 33 31, 30 28, 29 27, 26 22, 23 21, 20	Differential Analog Output (Output) - The full-scale differential analog output level is specified in the Analog Characteristics specification table.
VA VARX	24 41	Analog Power (Input) - Positive power supply for the analog section.
AGND	25 40	Analog Ground (Input) - Ground reference. Should be connected to analog ground.
MUTEC	38	Mute Control (Output) - The Mute Control pin outputs high impedance following an initial power -on condition or whenever the PDN bit is set to a "1", forcing the codec into power -down mode. The signal will remain in a high impedance state as long as the part is in power-down mode. The Mute Control pin goes to the selected "active" state during reset, muting, or if the master clock to left/right clock frequency ratio is incorrect. This pin is intended to be used as a control for external mute circuits to prevent the clicks and pops that can occur in any single supply system. The use of external mute circuits are not mandatory but may be desired for designs requiring the absolute minimum in extraneous clicks and pops.
LPFLT	39	PLL Loop Filer (Output) - An RC network should be connected between this pin and ground.
RXP7/GPO7 RXP6/GPO6 RXP5/GPO5 RXP4/GPO4 RXP3/GPO3 RXP2/GPO2 RXP1/GPO1	42 43 44 45 46 47 48	S/PDIF Receiver Input/ General Purpose Output (Input/ Output) - Receiver inputs for S/PDIF encoded data. The CS42518 has an internal 8:2 multiplexer to select the active receiver port, according to the Receiver Mode Control 2 resistor. These pins can also be configured as general purpose output pins, ADC Overflow indicators or Mute Control outputs according to the RXP/General Purpose Pin Control resistors.
RXP0	49	S/PDIF Receiver Input (Input) - Dedicated receiver input for S/PDIF encoded data.
TXP	50	S/PDIF Transmitter Output (Output) - S/PDIF encoded data output, mapped directly from one of the receiver inputs as indicated by the Receiver Mode Control 2 resistor.
VLP	53	Serial Port Interface Power (Input) - Determines the required signal level for the serial port interfaces.
SAI_SDOUT	54	Serial Audio Interface Serial Data Output (Output) - Output for two's complement serial audio PCM data from the S/PDIF incoming stream. This pin can also be configured to transmit the output of the internal and external ADCs.
RMCK	55	Recovered Master Clock (Output) - Recovered master clock output from the External Clock Reference

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -15

Q301 : CS42518 (8-Ch Codec with S/PDIF Receiver)

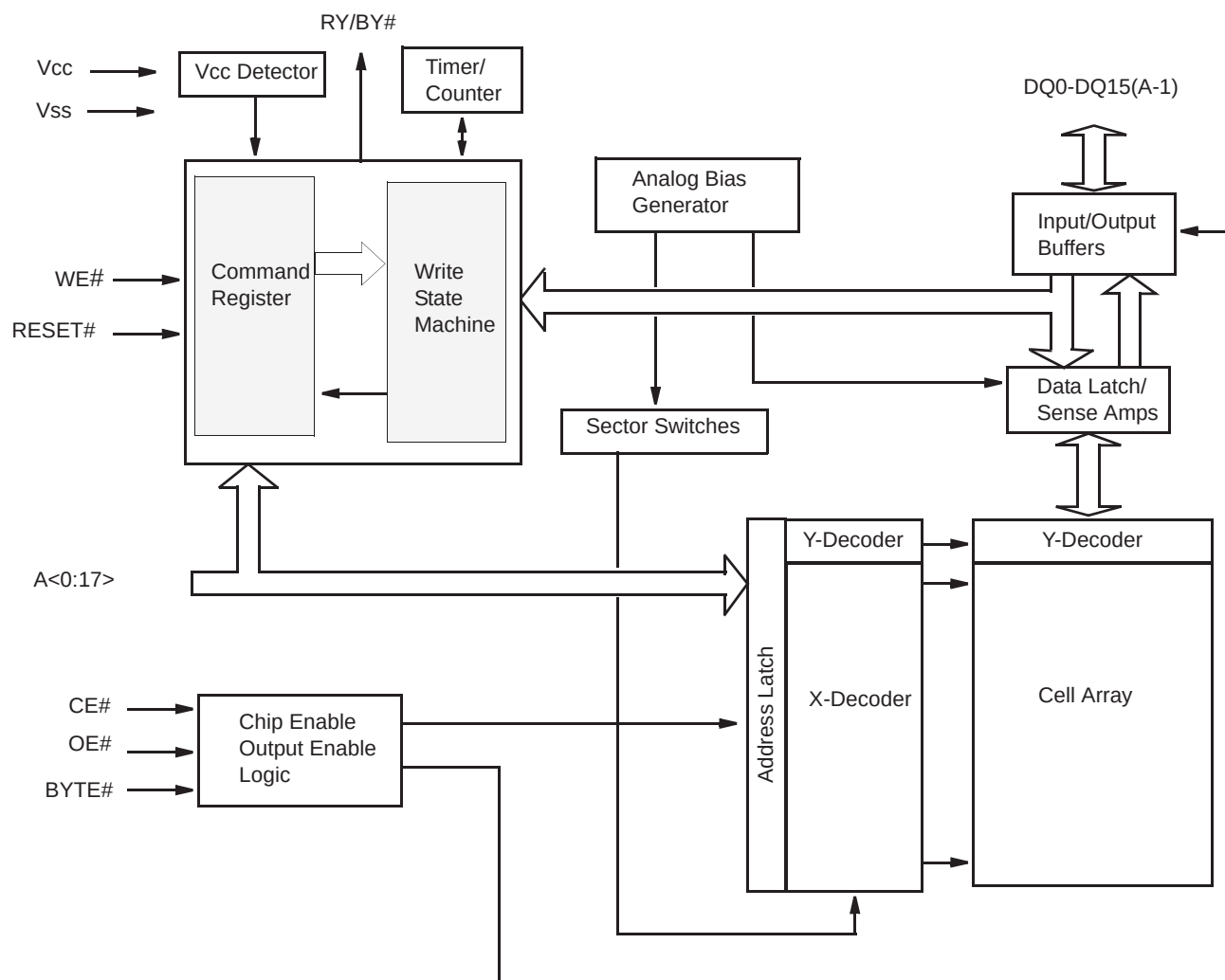
TERMINAL DESCRIPTION (3/3)

Pin Name	#	Pin Description
CL_SDOUT	56	CODEC Serial Data Output (Output) - Output for two's complement serial audio data the internal and external ADCs.
ADCIN1	58	External ADC Serial Input (Input) - The CS42518 provides for up two external stereo analog to digital converter inputs to provide a maximum of six channels on serial data output line when the CS42518 is placed in One Line mode.
ADCIN2	57	
OMCK	59	External Reference Clock (Input) - External clock reference that must be within the ranges specified in currently active on the serial audio data line.
SAI_LRCK	60	Serial Audio Interface Left/Right Clock (Input/Output) - Determines which channel, Left of Right, is currently active on the serial audio data line.
SAI_LRCK	61	Serial Audio Interface Serial Clock (Input/Output) - Serial clock for the Serial Audio Interface

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -16

Q282 : ES29LV400 (4 Mbit Flash Memory)

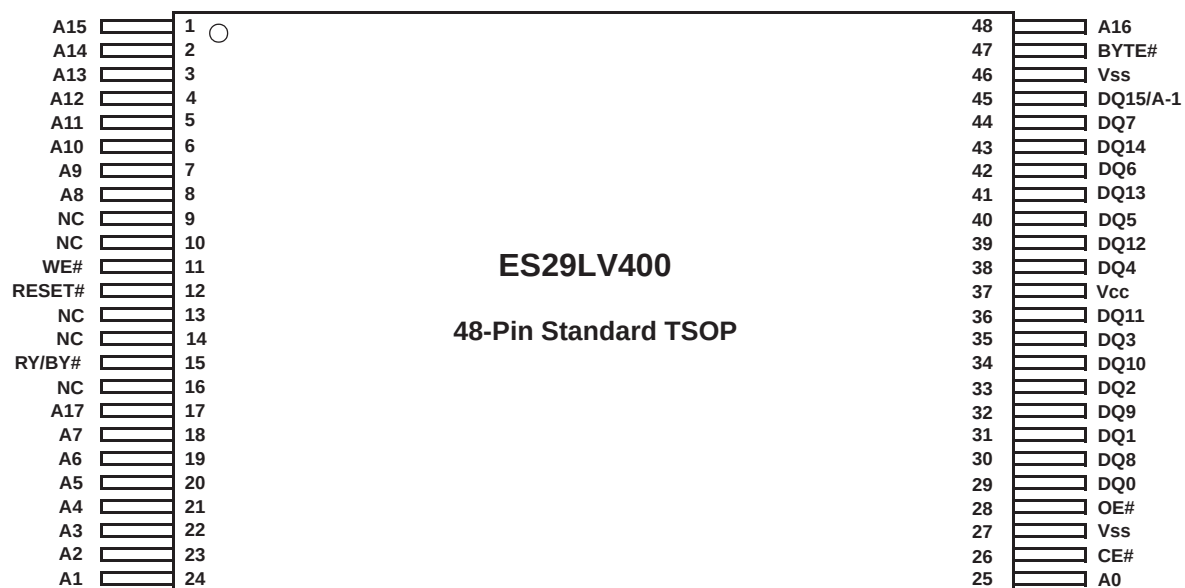
BLOCK DIAGRAM



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -17

Q282 : ES29LV400 (4 Mbit Flash Memory)

PIN CONFIGURATION



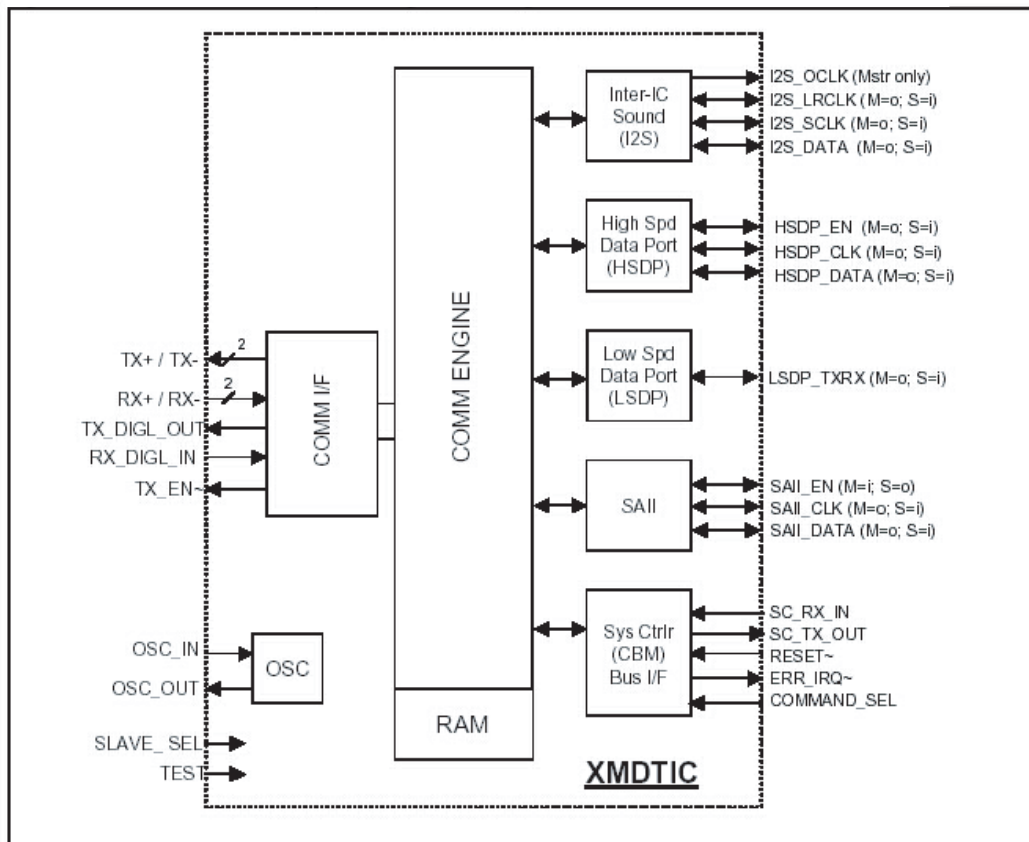
TERMINAL DESCRIPTION

Terminal	Description
A0-A17	18 Addresses
DQ0-DQ14	15 Data Inputs/Outputs
DQ15/A-1	DQ15 (Data Input/Output, Word Mode) A-1 (LSB Address Input, Byte Mode)
CE#	Chip Enable
OE#	Output Enable
WE#	Write Enable
RESET#	Hardware Reset Pin, Active Low
BYTE#	Selects 8-bit or 16-bit mode
RY/BY#	Ready/Busy Output
Vcc	3.0 volt-only single power supply (see Product Selector Guide for speed options and voltage supply tolerances)
Vss	Device Ground
NC	Pin Not Connected Internally

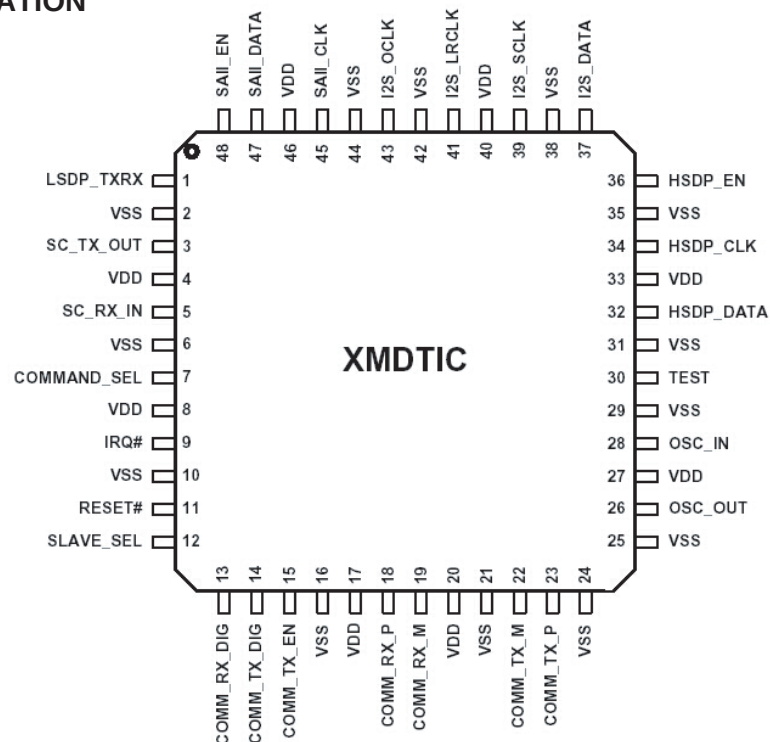
IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -18

Q2001 : F2602E (XM Digital Transceiver)

BLOCK DIAGRAM



PIN CONFIGURATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -19

Q2001 : F2602E (XM Digital Transceiver)

TERMINAL DESCRIPTION (1/2)

Pin #	Pin Name	Type	Function in Slave Mode	Function in Master Mode	Notes
1	LSDP_TXRX	S=In M=Out	Low Speed Data Port Output	Low Speed Data Port Input	LVTTL S/T
3	SC_TX_OUT	S=Out M=Out	System Controller Bus (CBM) Transmit Data Out	System Controller Bus (CBM) Transmit Data Out	4mA, SLC
5	SC_RX_IN	S=In M=In	System Controller Bus (CBM) Receive Data In	System Controller Bus (CBM) Receive Data In	LVTTL S/T
7	COMMAND_SEL	S=In M=In	Command Mode Select In (1= Command Mode, 0=Normal Mode)	Command Mode Select In (1= Command Mode, 0=Normal Mode)	LVTTL S/T
9	IRQ#	S=Out M=Out	Interrupt Request Out (Active Low)	Interrupt Request Out (Active Low)	4mA Open Drain
11	RESET#	S=In M=In	Asynchronous Reset In, (Active Low)	Asynchronous Reset In, (Active Low)	LVTTL S/T
12	SLAVE_SEL	S=In M=In	M/S Mode Select In (High = Slave Mode)	M/S Mode Select In (Low = Master Mode)	LVTTL S/T
13	COMM_RX_DIG	S=In M=In	DT Comm Bus External Transceiver Receive Data In	DT Comm Bus External Transceiver Receive Data In	LVTTL S/T
14	COMM_TX_DIG	Output	DT Comm Bus External Transceiver Transmit Data Out	DT Comm Bus External Transceiver Transmit Data Out	LVTTL S/T
15	COMM_TX_EN	Output	DT Comm Bus External Transceiver Direction Out (1=Transmit, 0=Receive)	DT Comm Bus External Transceiver Direction Out (1=Transmit, 0=Receive)	LVTTL S/T
18	COMM_RX_P	S=In M=In	DT Comm Bus Internal Receiver Differential Positive In	DT Comm Bus Internal Receiver Differential Positive In	LVDS in+
19	COMM_RX_M	S=In M=In	DT Comm Bus Internal Receiver Differential Negative In	DT Comm Bus Internal Receiver Differential Negative In	LVDS in-
22	COMM_TX_M	Output	DT Comm Bus Internal Transmitter Differential Negative Out	DT Comm Bus Internal Transmitter Differential Negative Out	LVDS out-
23	COMM_TX_P	Output	DT Comm Bus Internal Transmitter Differential Positive Out	DT Comm Bus Internal Transmitter Differential Positive Out	LVDS out+
26	OSC_OUT	Output	Crystal Output	Crystal Output	Crystal Buffer
28	OSC_IN	S=In M=In	Crystal Input	Crystal Input	Crystal Buffer
30	TEST	S=In M=In	Factory Test Mode Select (1=Test, 0= Normal Oper.)	Factory Test Mode Select (1=Test, 0= Normal Oper.)	LVTTL S/T
32	HSDP_DATA	S=In M=Out	High Speed Data Port Data Input	High Speed Data Port Data Output	Out= 4mA, SLC In=LVTTL S/T
34	HSDP_CLK	S=In M=Out	High Speed Data Port Clock Input	High Speed Data Port Clock Output	Out= 4mA, SLC In=LVTTL S/T
36	HSDP_EN	S=Out M=In	High Speed Data Port Enable Output	High Speed Data Port Enable Input	Out= 4mA, SLC In=LVTTL S/T
37	I2S_DATA	S=In M=Out	I2S Digital Port Data In	I2S Digital Audio Port Data Out	Out= 4mA, SLC In=LVTTL S/T

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -20

Q2001 : F2602E (XM Digital Transceiver)

TERMINAL DESCRIPTION (2/2)

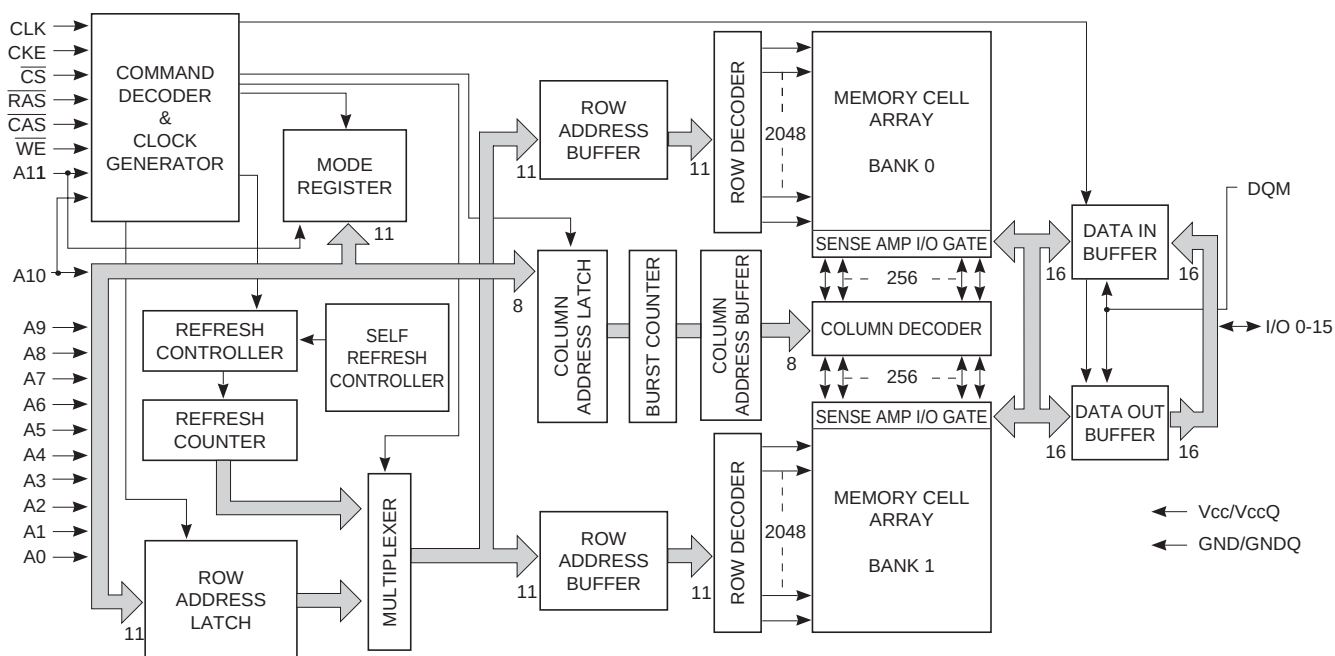
Pin #	Pin Name	Type	Function in Slave Mode	Function in Master Mode	Notes
39	I2S_SCLK	S=In M=Out	I2S Digital Audio Port Bit Clock In	I2S Digital Audio Port Bit Clock Out	Out= 4mA, SLC In=LVTTL S/T
41	I2S_LRCLK	S=In M=Out	I2S Digital Audio Port Left/Right Clock In	I2S Digital Audio Port Left/Right Clock Out	Out= 4mA, SLC In=LVTTL S/T
43	I2S_OCLK	S=In M=Out	I2S Digital Audio Port Oversample Clock (not used - connect to Gnd???)	I2S Digital Audio Port Oversample Clock Out	Out= 4mA, SLC
45	SAII_CLK	S=Out M=In	SAII Port Clock Output	SAII Port Clock Input	Out= 4mA, SLC 3.3V S/T
47	SAII_DATA	S=Out M=In	SAII Port Data Output	SAII Port Data Input	Out= 4mA, SLC In=LVTTL S/T
48	SAII_REQ	S=In M=Out	SAII Port Request Input	SAII Port Request Output	Out= 4mA, SLC In=LVTTL S/T

Pin#	Pin Name	Type	Function in Slave Mode	Function in Master Mode	Notes
4, 8, 17, 20, 27, 33, 40, 46	VDD	PWR	+3.3V Supply Voltage	+3.3V Supply Voltage	
2, 6, 10, 16, 21, 24, 25, 29, 31, 25, 38, 42, 44	VSS	GND	Digital Ground	Digital Ground	

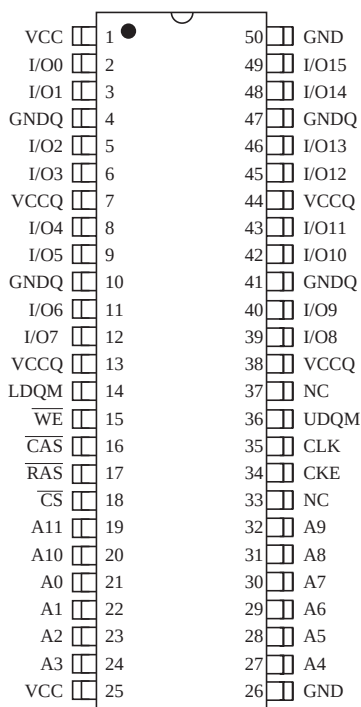
IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -21

Q281: IC42S16100 (16-Mbit Synchronous Dynamic RAM)

BLOCK DIAGRAM



PIN CONFIGURATION



IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS -22

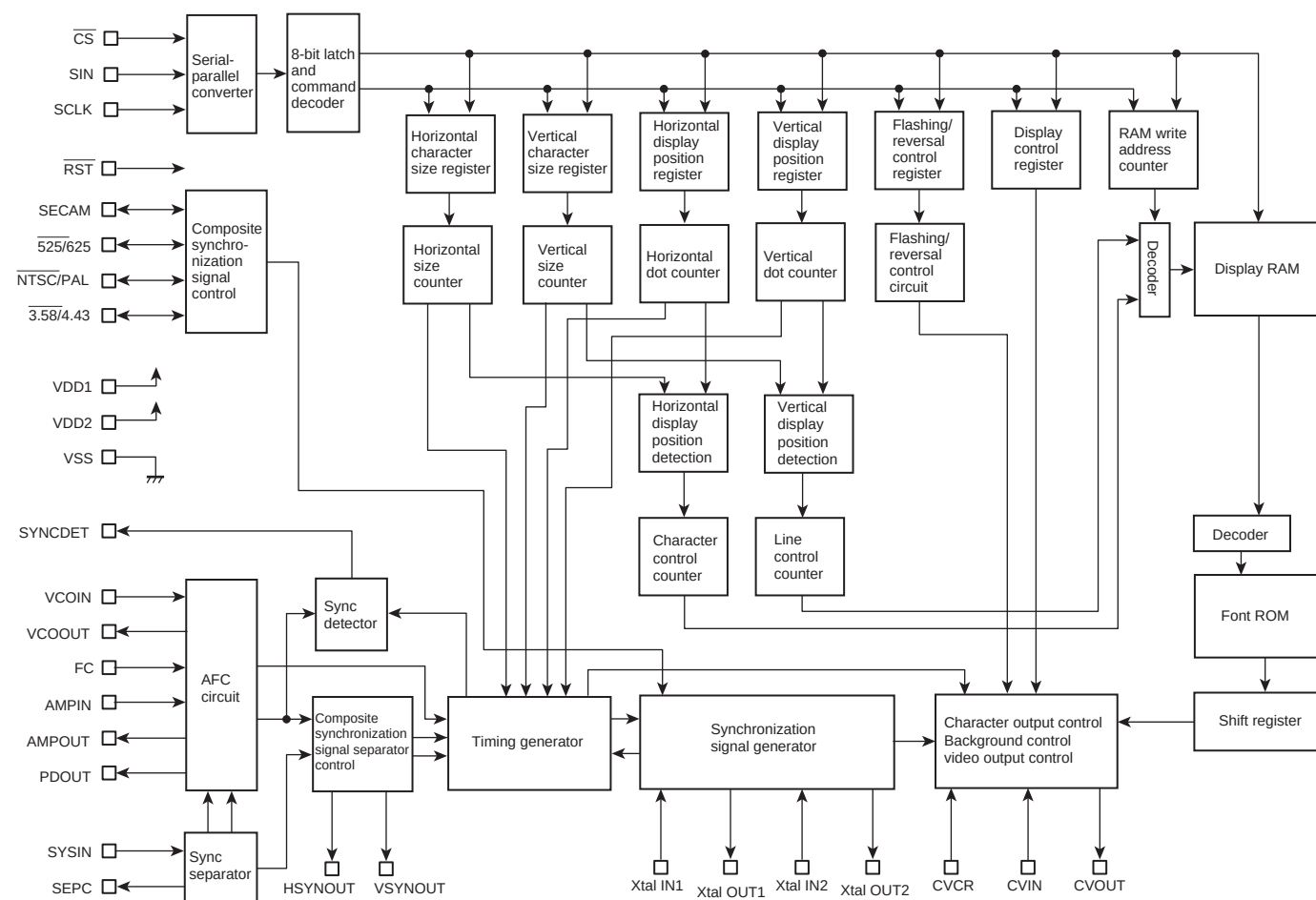
Q281: IC42S16100 (16-Mbit Synchronous Dynamic RAM)

TERMINAL DESCRIPTION

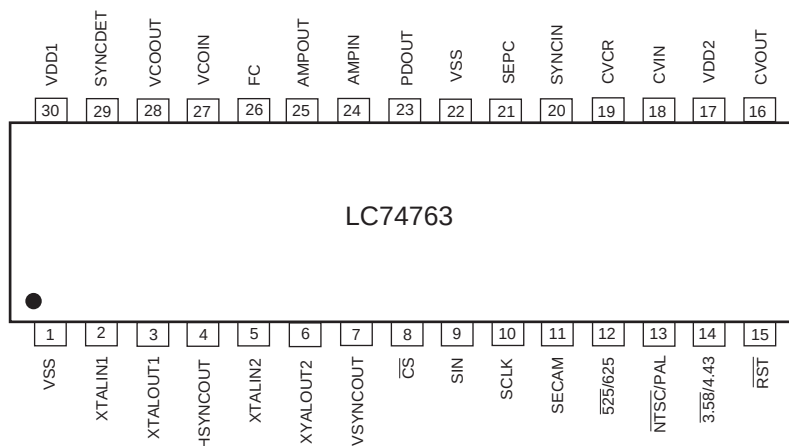
Pin No.	Pin name	Function
20 to 24 27 to 32	A0-A10	A0 to A10 are address inputs. A0-A10 are used as row address inputs during active command input and A0-A7 as column address inputs during read or write command input. A10 is also used to determine the precharge mode during other commands. If A10 is LOW during precharge command, the bank selected by A11 is precharged, but if A10 is HIGH, both banks will be precharged. When A10 is HIGH in read or write command cycle, the precharge starts automatically after the burst access. These signals become part of the OP CODE during mode register set command input.
19	A11	A11 is the bank selection signal. When A11 is LOW, bank 0 is selected and when high, bank 1 is selected. This signal becomes part of the OP CODE during mode register set command input.
16	$\overline{\text{CAS}}$	$\overline{\text{CAS}}$, in conjunction with the $\overline{\text{RAS}}$ and $\overline{\text{WE}}$, forms the device command. See the "Command Truth Table" item for details on device commands.
34	CKE	The CKE input determines whether the CLK input is enabled within the device. When is CKE HIGH, the next rising edge of the CLK signal will be valid, and when LOW, invalid. When CKE is LOW, the device will be in either the power-down mode, the clock suspend mode, or the self refresh mode. The CKE is an asynchronous input.
35	CLK	CLK is the master clock input for this device. Except for CKE, all inputs to this device are acquired in synchronization with the rising edge of this pin.
18	$\overline{\text{CS}}$	The $\overline{\text{CS}}$ input determines whether command input is enabled within the device. Command input is enabled when $\overline{\text{CS}}$ is LOW, and disabled with $\overline{\text{CS}}$ is HIGH. The device remains in the previous state when $\overline{\text{CS}}$ is HIGH.
2, 3, 5, 6, 8, 9, 11, 12, 39, 40, 42, 43, 45, 46, 48, 49	I/O0 to I/O15	I/O0 to I/O15 are I/O pins. I/O through these pins can be controlled in byte units using the LDQM and UDQM pins.
14, 36	LDQM, UDQM	LDQM and UDQM control the lower and upper bytes of the I/O buffers. In read mode, LDQM and UDQM control the output buffer. When LDQM or UDQM is LOW, the corresponding buffer byte is enabled, and when HIGH, disabled. The outputs go to the HIGH impedance state when LDQM/UDQM is HIGH. This function corresponds to $\overline{\text{OE}}$ in conventional DRAMs. In write mode, LDQM and UDQM control the input buffer. When LDQM or UDQM is LOW, the corresponding buffer byte is enabled, and data can be written to the device. When LDQM or UDQM is HIGH, input data is masked and cannot be written to the device.
17	$\overline{\text{RAS}}$	$\overline{\text{RAS}}$, in conjunction with $\overline{\text{CAS}}$ and $\overline{\text{WE}}$, forms the device command. See the "Command Truth Table" item for details on device commands.
15	$\overline{\text{WE}}$	$\overline{\text{WE}}$, in conjunction with $\overline{\text{RAS}}$ and $\overline{\text{CAS}}$, forms the device command. See the "Command Truth Table" item for details on device commands.
7, 13, 38, 44	VccQ	VccQ is the output buffer power supply.
1, 25	Vcc	Vcc is the device internal power supply.
4, 10, 41, 47	GNDQ	GNDQ is the output buffer ground.
26, 50	GND	GND is the device internal ground.

Q4004: LC74763-9836 (On-Screen Display IC)

BLOCK DIAGRAM



PIN CONFIGRATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -24

Q4004: LC74763-9836 (On-Screen Display IC)

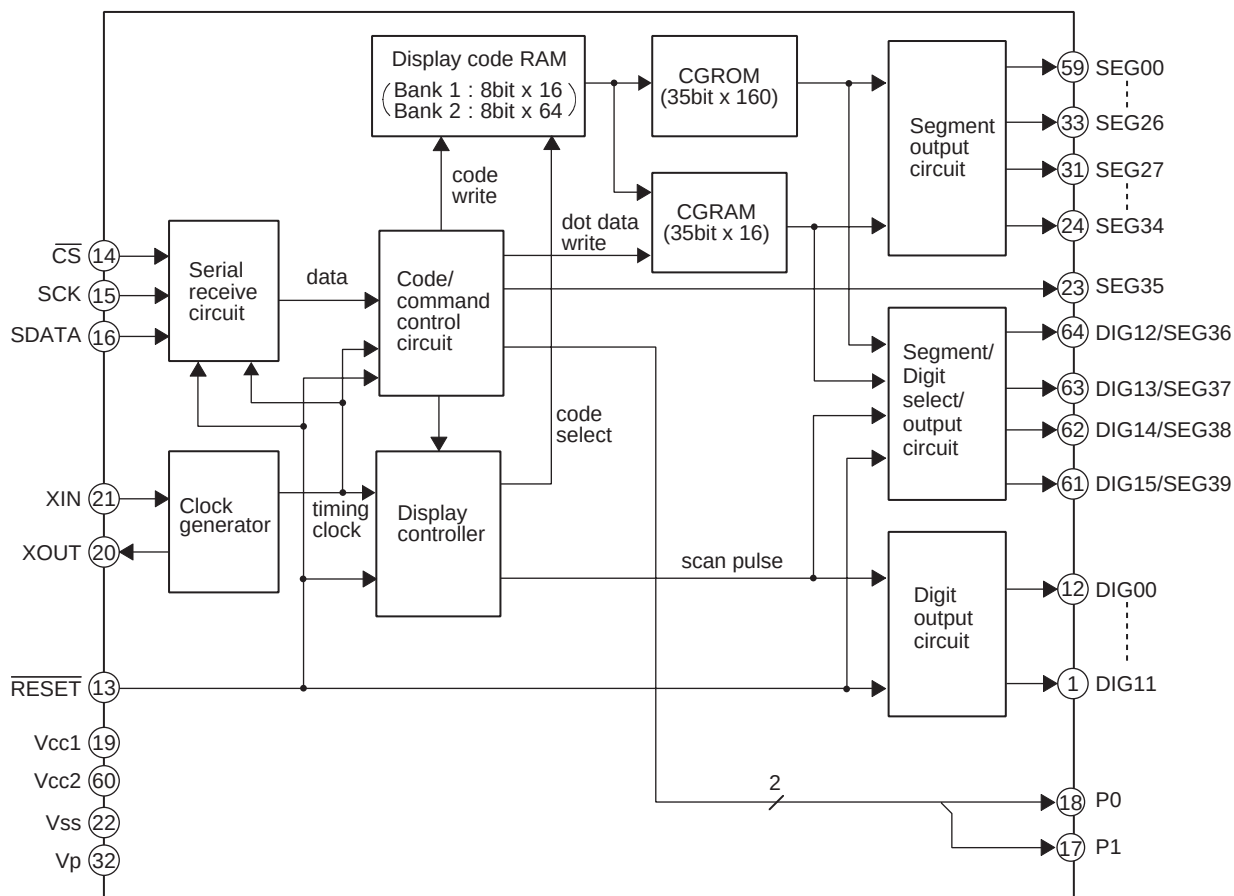
TERMINAL DESCRIPTION

Pin No.	Symbol	Function	Description
1	V _{SS}	Ground	Ground connection
2	Xtal _{IN1}	Crystal oscillator connection	Connection for the crystal and capacitor used to form the crystal oscillator that generates the internal synchronization signal. The oscillator can be selected with a command switch.
3	Xtal _{OUT1}		
4	HSYNC _{OUT}	Horizontal synchronization output	Outputs the horizontal synchronization signal (AFC). The output polarity can be selected (metal option). Also functions as general output port (command switch).
5	Xtal _{IN2}	Crystal oscillator connection	Connection for the crystal and capacitor used to form the crystal oscillator that generates the internal synchronization signal.
6	Xtal _{OUT2}		
7	VSYNC _{OUT}	Vertical synchronization output	Outputs the vertical synchronization signal. The output polarity can be selected (metal option). Also functions as general output port (command switch).
8	$\overline{\text{CS}}$	Enable input	Enables/disables serial data input. Serial data is enabled when this pin is low (hysteresis input). Pull-up resistor built in (metal option).
9	SIN	Data input	Serial data input (hysteresis input). Pull-up resistor built in (metal option).
10	SCLK	Clock input	Clock input for serial data input (hysteresis input). Pull-up resistor built in (metal option).
11	SECAM	SECAM mode switch input/output (command switch)	During input, switches between SECAM and other modes. During output, functions as general output port or internal V output (command switch). Low = other modes, high = SECAM mode
12	$\overline{525/625}$	525/625 switch input/output (command switch)	During input, switches between 525 scan lines and 625 scan lines. During output, functions as general output port or character data output (command switch). Low = 525 lines, high = 625 lines
13	$\overline{\text{NTSC/PAL}}$	NTSC/PAL switch input/output (command switch)	Switches the color mode between NTSC and PAL. During output, functions as general output port or frame data output (command switch). Low = NTSC, high = PAL
14	$\overline{3.58/4.43}$	3.58/4.43 switch input/output (command switch)	Switch FSC between 3.58 MHz and 4.43 MHz. During output, functions as general output port or halftone output (command switch). Low = 3.58, high = 4.43
15	$\overline{\text{RST}}$	Reset input	System reset input pin, low is active (hysteresis input). Pull-up resistor built in (metal option).
16	CV _{OUT}	Video signal output	Composite video output
17	V _{DD2}	Power supply connection	Power supply connection for composite video signal level generation
18	CV _{IN}	Video signal input	Composite video input
19	CV _{CR}	Video signal input	SECAM chroma signal input
20	SYNC _{IN}	Sync separator circuit input	Built-in sync separator circuit video signal input
21	SEP _C	Sync separator circuit	Built-in sync separator circuit
22	V _{SS}	Ground	Ground connection
23	PD _{OUT}	Control voltage output	AFC control voltage output
24	AMP _{IN}	AFC filter connection	Filter connection
25	AMP _{OUT}		
26	FC	Control voltage input	AFC control voltage input
27	VCO _{IN}	LC oscillator connection	VCO LC oscillator circuit coil and capacitor connection
28	VCO _{OUT}		
29	SYNC _{DET}	External synchronization signal detection output	Outputs the exclusive NOR of the horizontal synchronization signal (AFC) and CSYNC (sync separator). The output polarity can be selected (metal option). Also functions as general output port (command switch).
30	V _{DD1}	Power supply connection	Power supply connection (+5 V: digital system power supply)

IC BLOCK DIAGRAM AND TERMINAL DESCRIPTIONS -25

Q7003: M66005 (FL Tube Driver)

BLOCK DIAGRAM



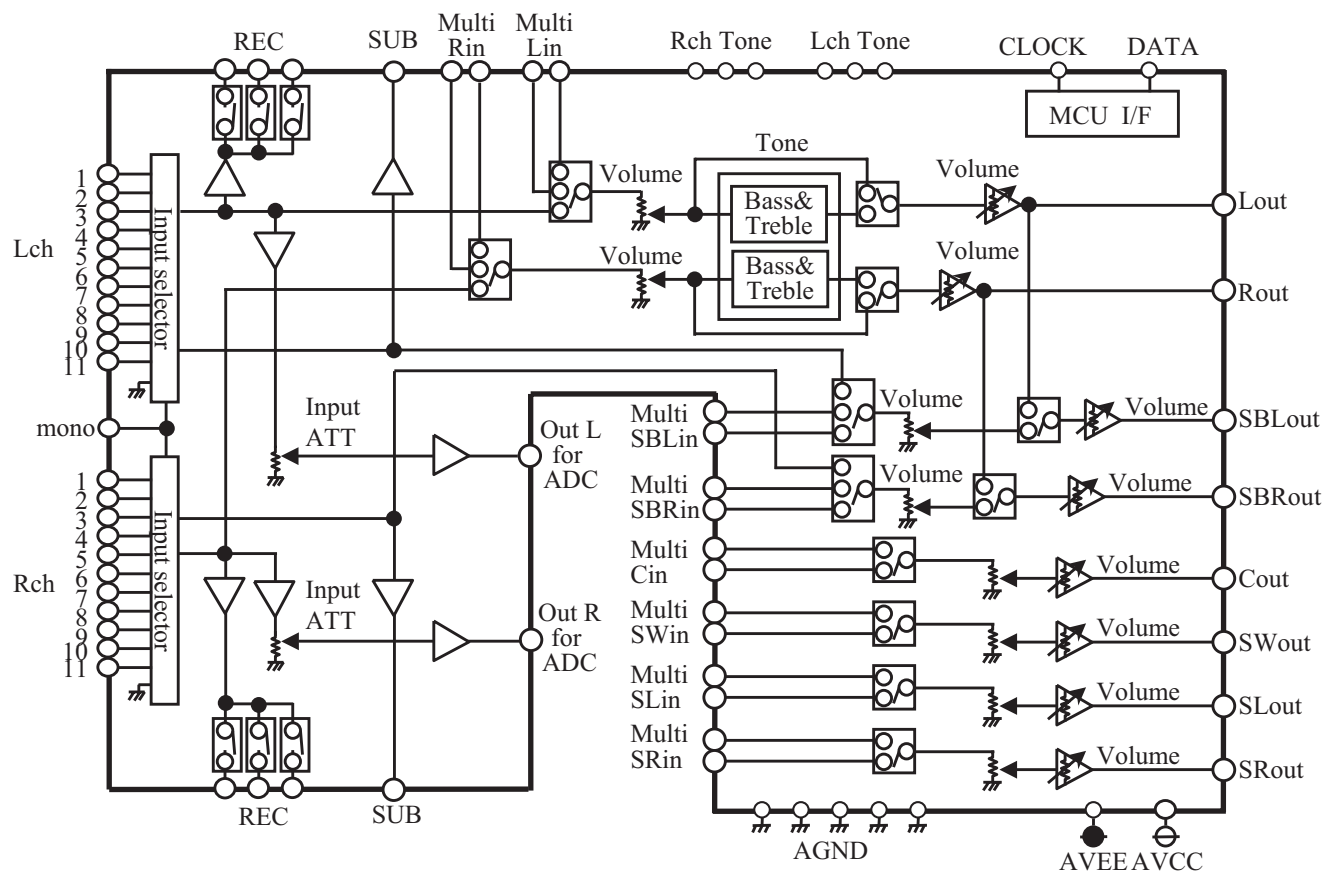
TERMINAL DESCRIPTION

PIN NO.	SYMBOL	PIN NAME	DESCRIPTION
13	$\overline{\text{RESET}}$	Reset input	This pin is used to initialize the internal state of the M66004.
14	$\overline{\text{CS}}$	Chip select input	"L" : Communication with the MCU is possible. "H" : Any instruction from the MCU is neglected.
15	SCK	Shift clock input	At the rising edge from "L" to "H", input data is shifted.
16	SDATA	Serial data input	Character code or command data to display is input from MSB.
21, 20	XIN, XOUT	Clock input Clock output	This pin is used to connect a resister and a capacitor externally to set oscillation frequency.
1~12 61~64	DIG00 ~ DIG15	Digit output	These pins are used to connect to digit pins of VFD.
23~31 33~59	SEG00 ~ SEG39	Segment output	These pins are used to connect to segment pins of VFD.
17, 18	P0, P1		Output port (static operation)
19	VCC1		Positive power supply for internal logic.
60	VCC2		Positive power supply for high-pressure-resistant output port.
22	VSS		GND
32	VP		Negative power supply for VFD drive.

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -26

Q5501 : R2S15211FP (8 ch Electronic Volume and 11 Input Selector and Tone Control)

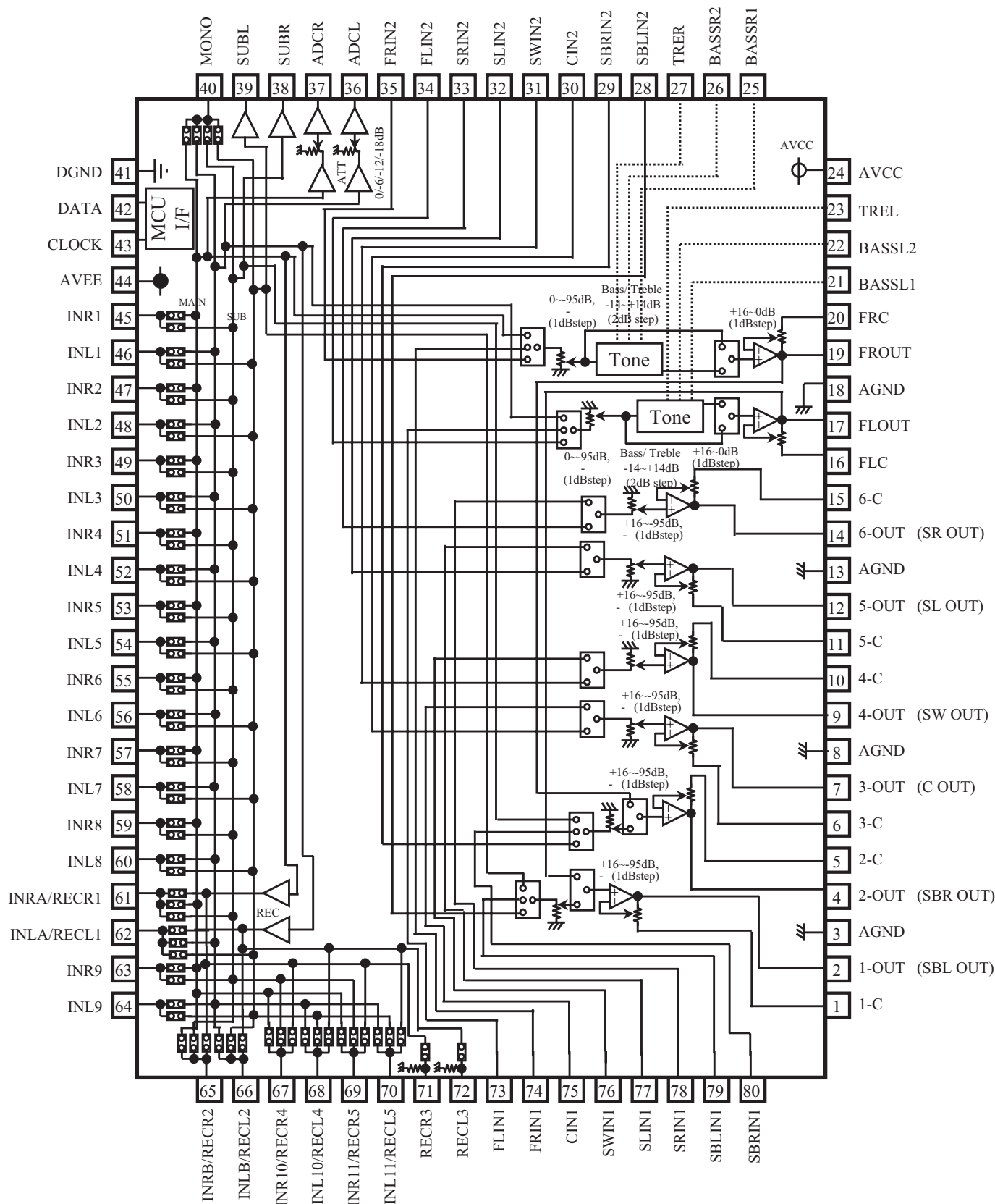
SYSTEM BLOCK DIAGRAM



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -27

Q5501 : R2S15211FP (8 ch Electronic Volume and 11 Input Selector and Tone Control)

BLOCK DIAGRAM AND PIN CONFIGURATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -28

Q5501 : R2S15211FP (8 ch Electronic Volume and 11 Input Selector and Tone Control)

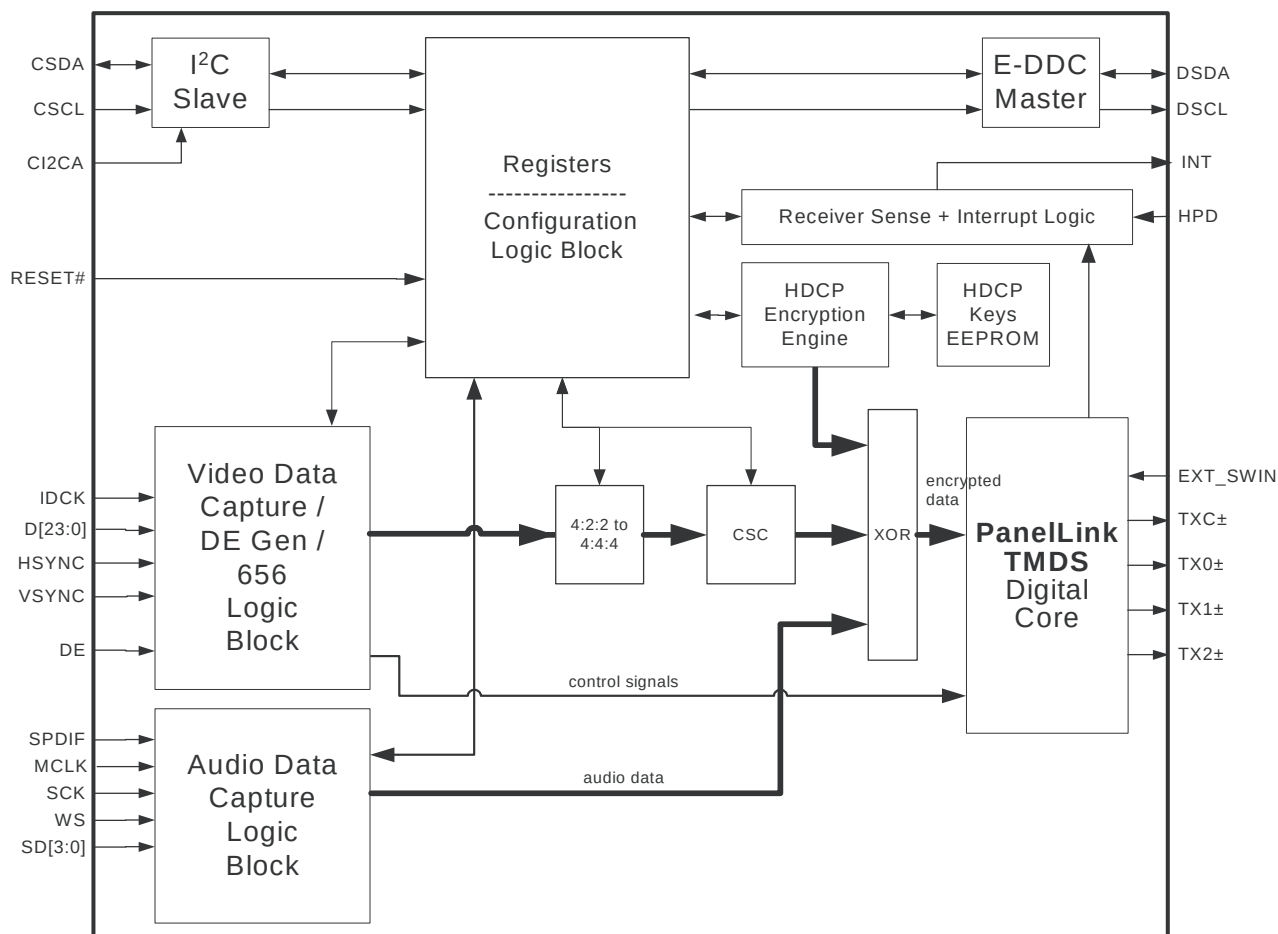
TERMINAL DESCRIPTION

PIN No.	Name	Function
19,17, 14,12, 9,7, 4,2	FROUT,FLOUT, 6-OUT,5-OUT, 4-OUT, 3-OUT, 2-OUT,1-OUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
20,16, 15,11, 10,6, 5,1	FRC,FLC, 6-C,5-C, 4-C,3-C, 2-C,1-C	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
3,8, 13,18	AGND	Analog ground of internal circuit
23,27	TREL, TRER	Frequency characteristic setting pin of L/R channel tone control (Treble)
21,22, 25,26	BASSL1,BASSL2 BASSR1,BASSR2	Frequency characteristic setting pin of L/R channel tone control (Bass)
24	AVCC	Positive power supply to internal circuit
35,34, 33,32, 31,30, 29,28	FRIN2, FLIN2, SRN2,SLIN2, SWIN2,CIN2, SBRIN2,SBLIN2	Input pin of L/R/C/SW/SL/SR/SBL/SBR channel (Multi IN 1/2)
73,74, 75,76, 77,78, 79,80	FLIN1, FRIN1, CIN1,SWIN1, SLIN1,SRIN1, SBLIN1,SBRIN1	
41	DGND	Digital ground of internal circuit
42	DATA	Input pin of control data
43	CLOCK	Input pin of control clock
44	AVEE	Negative power supply to internal circuit
46,48,50, 52,54,56, 58,60,64	INL1,INL2, INL3, INL4,INL5,INL6, INL7,INL8,INL9	Input pin of L/R channel (Input Selector)
45,47,49, 51,53,55, 57,59,63	INR1,INR2, INR3, INR4,INR5,INR6, INR7,INR8,INR9	
40	MONO	Input pin of monaural (Input Selector)
38,39	SUBL,SUBR	Output pin for L/R channel SUB Output
36,37	ADCL, ADCR	Output pin for L/R channel ADC
72	RECL3	Output pin for L/R channel REC Output
71	RECR3	
61,62, 65,66, 67,68, 69,70	INRA/RECR1,INLA/RECL1, INRB/RECR2,INLB/RECL2, INR10/RECR4,INL10/RECL4, INR11/RECR5,INL11/RECL5	Input pin of L/R channel (Input Selector)/ Output pin for L/R channel REC Output

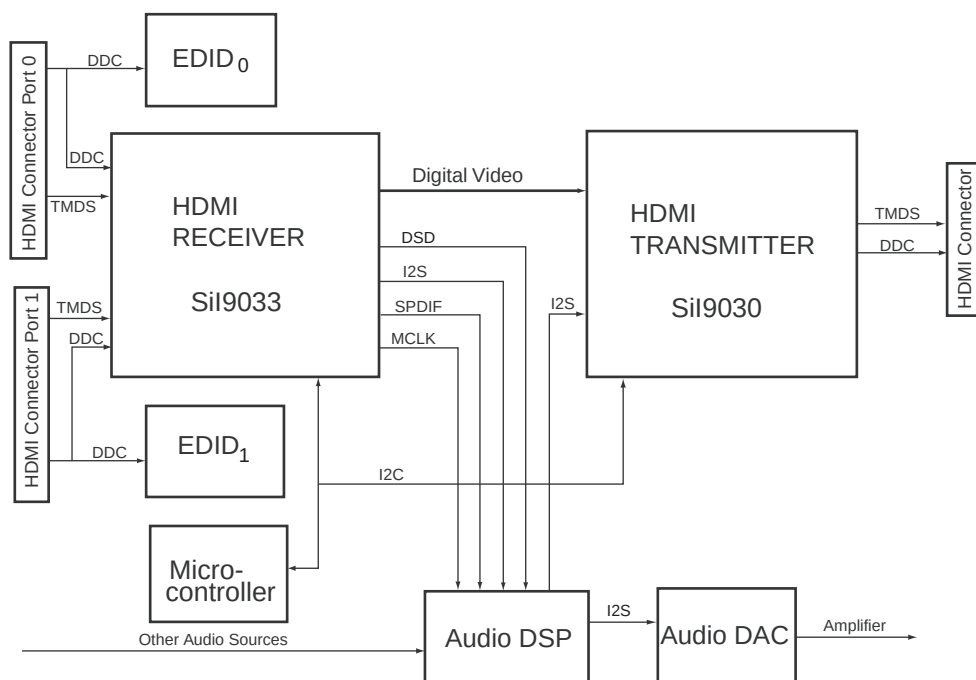
IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -29

Q8401 : SiI9030CTU (HDMI Transmitter)

BLOCK DIAGRAM



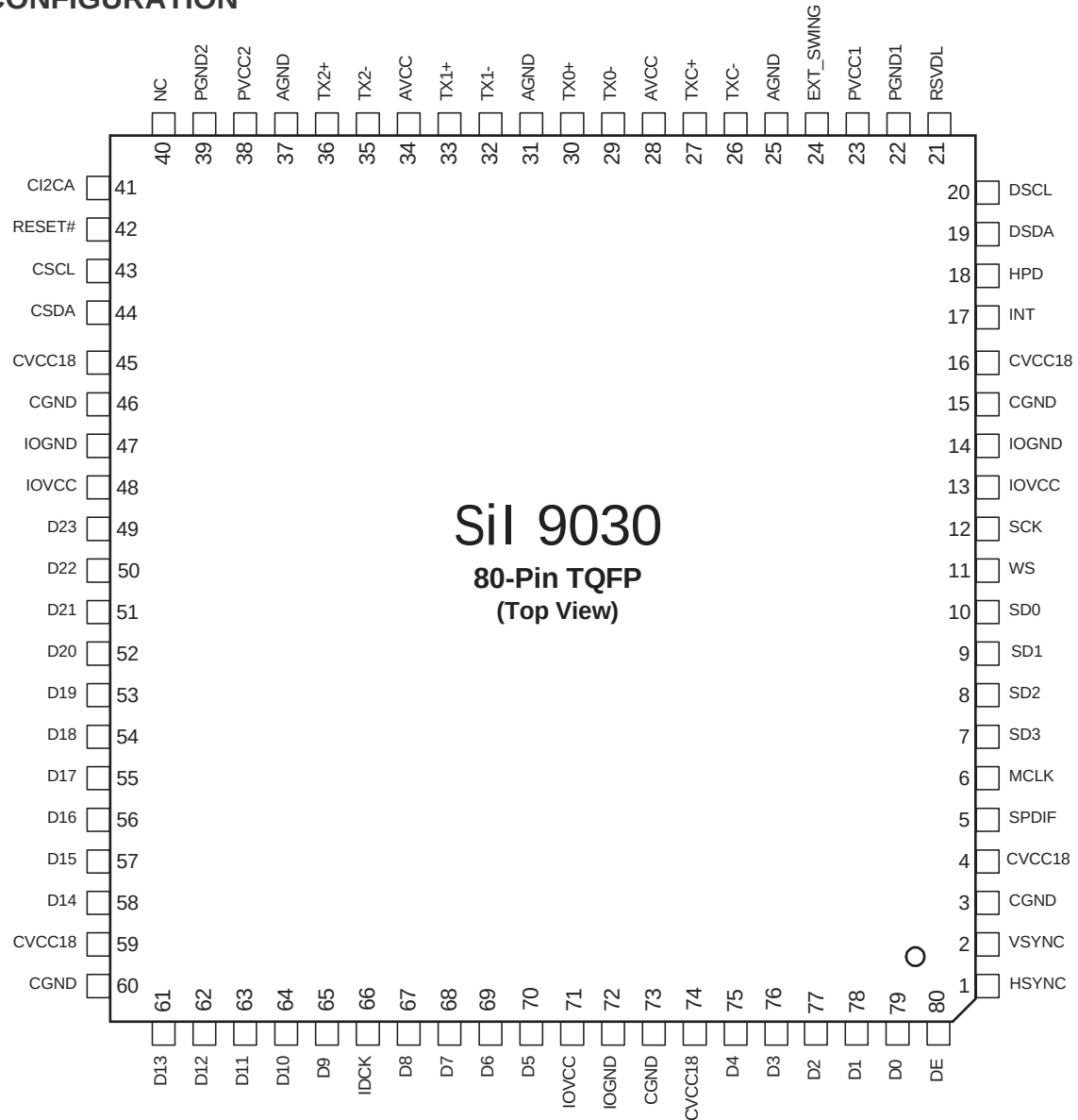
SYSTEM APPLICATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -30

Q8401 : SiI9030CTU (HDMI Transmitter)

PIN CONFIGURATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -31

Q8401 : SiI9030CTU (HDMI Transmitter)

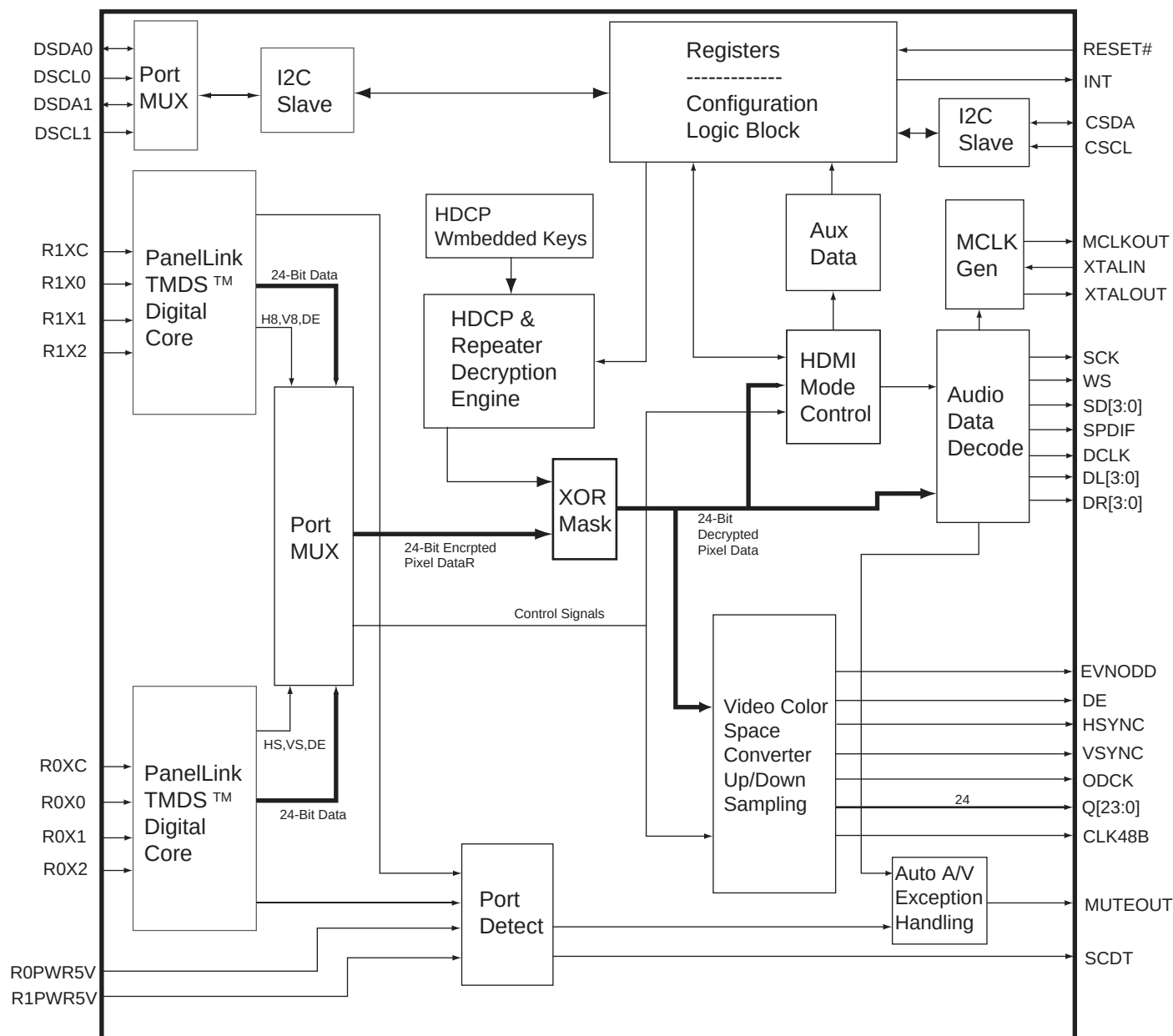
TERMINAL DESCRIPTION

Pin #	Pin Name	I/O	Description	Use
1	HSYNC	I	Horizontal Sync input control signal	Video and Audio
2	VSYNC	I	Vertical Sync input control signal	Video and Audio
3	CGND		Digital core GND.	Ground
4	CVCC18		Digital core VCC. Connect to 1.8V supply.	Power
5	SPDIF	I	S/PDIF Audio input	Video and Audio
6	MCLK	I	Audio Input Master Clock	Video and Audio
7	SD3	I	I2S Serial Data	Video and Audio
8	SD2	I	I2S Serial Data	Video and Audio
9	SD1	I	I2S Serial Data	Video and Audio
10	SD0	I	I2S Serial Data	Video and Audio
11	WS	I	I2S Word Select	Video and Audio
12	SCK	I	I2S Serial Clock	Video and Audio
13	IOVCC		IO Pin VCC. Connect to 3.3V supply.	Power
14	IOGND		IO Pin GND.	Ground
15	CGND		Digital core GND.	Ground
16	CVCC18		Digital core VCC. Connect to 1.8V supply.	Power
17	INT	O	Interrupt Output.	Confirmation/Programming
18	HPD	I	Hot Plug Detect Input.	Confirmation/Programming
19	DSDA	I/O	DDC data	Control
20	DSCL	I/O	DDC Clock	Control
21	RSVDL	I	Reserved for use by Silicon image, and must be tied LOW.	Confirmation/Programming
22	PGND1		TMDS Core PLL Ground.	Ground
23	PVCC1		TMDS Core PLL Power. Connect to 3.3V supply.	Power
24	EXT_SWING	I	Voltage Swing Adjustment. The resistor between AVCC and this pin determines the amplitude of the voltage swing.	Differential signal data
25	AGND		Analog GND.	Ground
26	TXC-	O	TMDS output clock.	Differential signal data
27	TXC+	O		
28	AVCC		Analog VCC. Connect to 3.3V supply.	Power
29	TX0-	O	TMDS output data.	Differential signal data
30	TX0+	O		
31	AGND		Analog GND.	Ground
32	TX1-	O	TMDS output data.	Differential signal data
33	TX1+	O		
34	AVCC		Analog VCC. Connect to 3.3V supply.	Power
35	TX2-	O	TMDS output data.	Differential signal data
36	TX2+	O		
37	AGND		Analog GND.	Ground
38	PVCC2		Filter PLL Power. Connect to 3.3V supply.	Power
39	PGND2		Filter PLL Ground.	Ground
40	NC		Not connected.	
41	CI2CA	I	I2C device address select	Control
42	RESET	I	Reset Pin. Active LOW	Control
43	CSCL	I	I2C Clock	Control
44	CSDA	I/O	I2C Data	Control
45	CVCC18		Digital core VCC. Connect to 1.8V supply.	Power
46	CGND		Digital core GND.	Ground
47	IOGND		IO Pin GND.	Ground
48	IOVCC		IO Pin VCC. Connect to 3.3V supply.	Power
49	D23	I	12-bit Input Pixel Data Bus. These pins are used in 24-bit mode, single-edge mode.	Video and Audio
50	D22	I		
51	D21	I		
52	D20	I		
53	D19	I		
54	D18	I		
55	D17	I		
56	D16	I		
57	D15	I		
58	D14	I		
59	CVCC18		Digital core VCC. Connect to 1.8V supply.	Power
60	CGND		Digital core GND.	Ground
61	D13	I	12-bit Input Pixel Data Bus. These pins are used in 24-bit mode, single-edge mode.	Video and Audio
62	D12	I		
63	D11	I		
64	D10	I		
65	D9	I		
66	IDCK	I	Input Data Clock	Video and Audio
67	D8	I	12-bit Input Pixel Data Bus. These pins are used in 24-bit mode, single-edge mode.	Video and Audio
68	D7	I		
69	D6	I		
70	D5	I		
71	IOVCC		IO Pin VCC. Connect to 3.3V supply.	Power
72	IOGND		IO Pin GND.	Ground
73	CGND		Digital core GND.	Ground
74	CVCC18		Digital core VCC. Connect to 1.8V supply.	Power
75	D4	I	12-bit Input Pixel Data Bus. These pins are used in 24-bit mode, single-edge mode.	Video and Audio
76	D3	I		
77	D2	I		
78	D1	I		
79	D0	I		
80	DE	I	Data enable	Video and Audio

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -32

Q8501 : Sil9033 (HDMI Receiver)

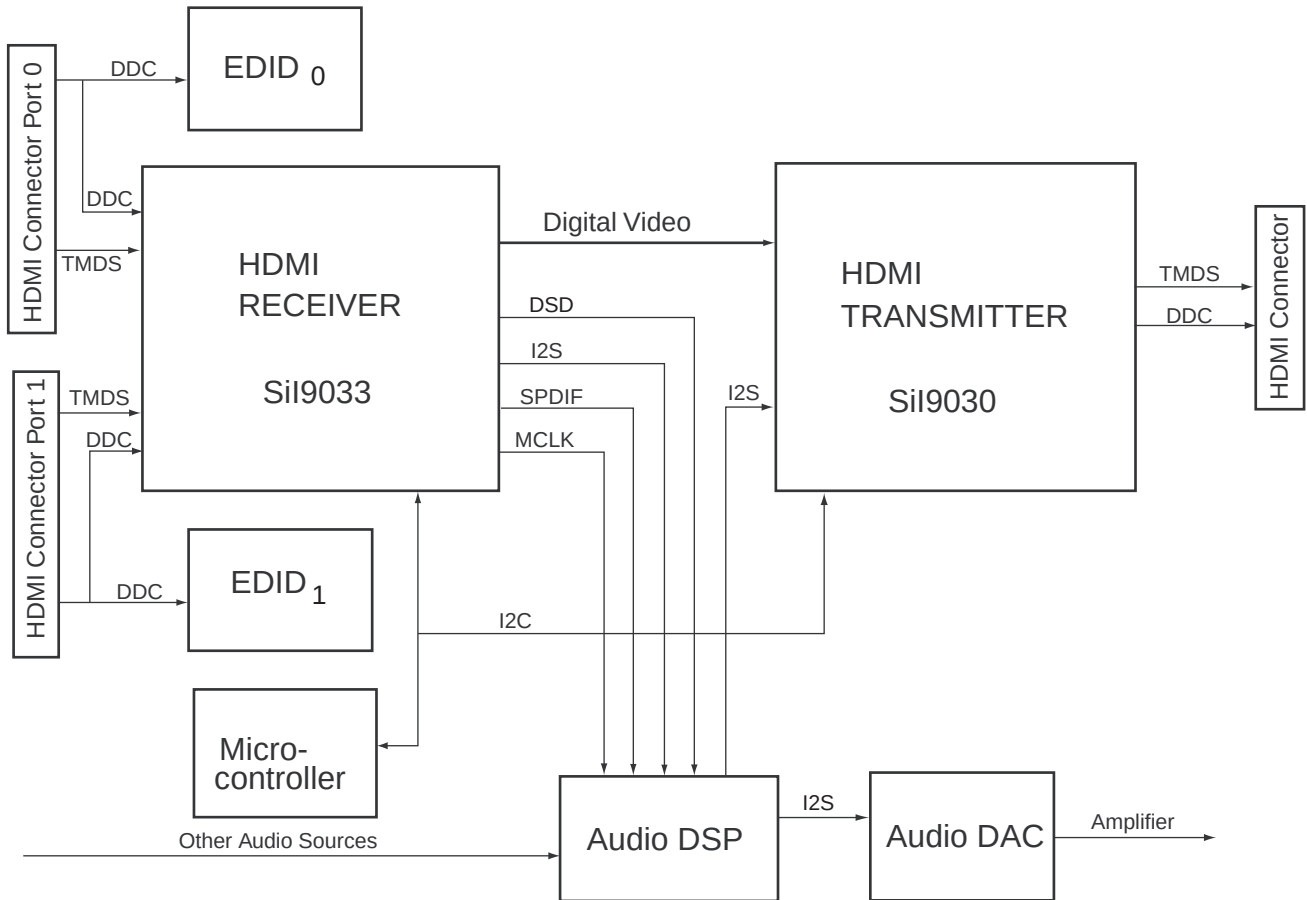
BLOCK DIAGRAM



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -33

Q8501 : Sil9033 (HDMI Receiver)

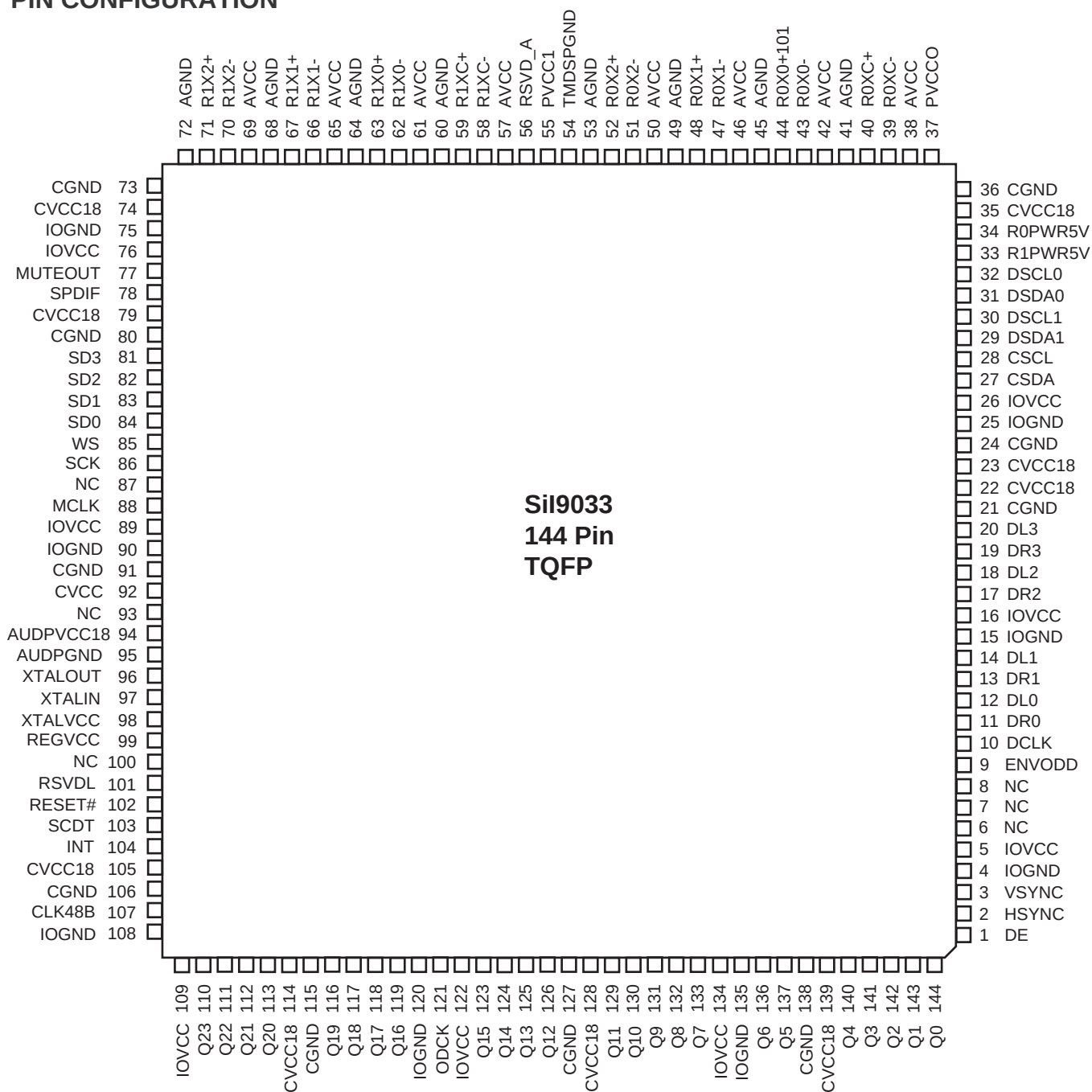
SYSTEM APPLICATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -34

Q8501 : Sil9033 (HDMI Receiver)

PIN CONFIGURATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -35

Q8501 : Sil9033 (HDMI Receiver)

TERMINAL DESCRIPTION (1/5)

Digital Video Output Pins

Pin Name	Pin #	Strength	Type	Dir	Description
Q0	144	8 mA	LVTTL	Output	24-bit Output Pixel Data Bus.
Q1	143		LVTTL	Output	
Q2	142		LVTTL	Output	
Q3	141		LVTTL	Output	
Q4	140		LVTTL	Output	
Q5	137		LVTTL	Output	
Q6	136		LVTTL	Output	
Q7	133		LVTTL	Output	
Q8	132		LVTTL	Output	
Q9	131		LVTTL	Output	
Q10	130		LVTTL	Output	
Q11	129		LVTTL	Output	
Q12	126		LVTTL	Output	
Q13	125		LVTTL	Output	
Q14	124		LVTTL	Output	
Q15	123		LVTTL	Output	
Q16	119		LVTTL	Output	
Q17	118		LVTTL	Output	
Q18	117		LVTTL	Output	
Q19	116		LVTTL	Output	
Q20	113		LVTTL	Output	
Q21	112		LVTTL	Output	
Q22	111		LVTTL	Output	
Q23	110		LVTTL	Output	
DE	1		LVTTL	Output	Data enable.
HSYNC	2		LVTTL	Output	Horizontal Sync Output control signal.
VSYNC	3		LVTTL	Output	Vertical Sync Output control signal.
ODCK	121	12 mA	LVTTL	Output	Output Data Clock.

NOTE

1. HSYNC and VSYNC outputs carry sync signals for both embedded and explicit sync configurations.
2. When transporting video data which uses fewer than 24 bits, the unused bits on the Q[] bus may still carry switching pixel data signals. Unused Q[] bus pins should be unconnected, masked or ignored by downstream devices. For example, carrying YCbCr 4:2:2 data with 16-bit width (see page 50), the bits Q[0] through Q[7] will output switching signals.
3. The output data bus, Q0 to Q23, may be wire-ORed to another device such that one device is always tri-stated. However, the Q0-Q23 pins do not have bus hold internal pull-ups or pull-downs, and so cannot pull the bus when all connected devices are tri-stated.

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -36

Q8501 : Sil9033 (HDMI Receiver)

TERMINAL DESCRIPTION (2/5) Digital Audio Output Pins

Pin Name	Pin #	Strength	Type	Dir	Description
XTALIN	97	—	LVTTL	In	Crystal Clock Input.
XTALOUT	96	—	LVTTL	Out	Crystal Clock Output.
MCLK	88	8 mA	LVTTL	Out	Audio Master Clock Output.
SCK	86	4 mA	LVTTL	Out	I ² S Serial Clock Output.
WS	85	4 mA	LVTTL	Out	I ² S Word Select Output.
SD0	84	4 mA	LVTTL	Out	I ² S Serial Data Output.
SD1	83	4 mA	LVTTL	Out	
SD2	82	4 mA	LVTTL	Out	
SD3	81	4 mA	LVTTL	Out	
DCLK	10	4 mA	LVTTL	Out	DSD Clock Output
DR0	11	4 mA	LVTTL	Out	DSD Serial Right Channel Data Output
DR1	13	4 mA	LVTTL	Out	
DR2	17	4 mA	LVTTL	Out	
DR3	19	4 mA	LVTTL	Out	
DL0	12	4 mA	LVTTL	Out	DSD Serial Left Channel Data Output
DL1	14	4 mA	LVTTL	Out	
DL2	18	4 mA	LVTTL	Out	
DL3	20	4 mA	LVTTL	Out	
SPDIF	78	4 mA	LVTTL	Out	S/PDIF Audio Output.
MUTEOUT	77	4 mA	LVTTL	Out	Mute Audio Output

NOTE

XTALIN may be driven at LVTTL levels by a clock (leaving XTALOUT unconnected), or connected through a crystal to XTALOUT. Refer to schematic on page 68.

TERMINAL DESCRIPTION (3/5) Configuration/Programming Pins

Pin Name	Pin #	Strength	Type	Dir	Description
INT	104	4 mA	LVTTL ¹	Out	Interrupt Output
RESET#	102	—	Schmitt	In	Reset Pin. Active LOW. 5V Tolerant.
DSCL0	32	—	Schmitt	In	DDC I ² C Clock for Port 0. 5V Tolerant.
DSDA0	31	4 mA	Schmitt	Bi-Di	DDC I ² C Data for Port 0. 5V Tolerant.
DSCL1	30	—	Schmitt	In	DDC I ² C Clock for Port 1. 5V Tolerant.
DSDA1	29	4 mA	Schmitt	Bi-Di	DDC I ² C Data for Port 1. 5V Tolerant.
CSCL	28	—	Schmitt	In	Configuration I ² C Clock. 5V Tolerant.
CSDA	27	4 mA	Schmitt	Bi-Di	Configuration I ² C Data. 5V Tolerant.
SCDT	103	12 mA	LVTTL	Out	Indicates active video at HDMI input port.
CLK48B	107	12 mA	LVTTL	Bi-Di	Data Bus Latch Enable. ²
R0PWR5V	34	—	Schmitt	In	Port 0 Transmitter Detect. 5V Tolerant.
R1PWR5V	33	—	Schmitt	In	Port 1 Transmitter Detect. 5V Tolerant.
RSVDL	101	—	LVTTL	In	Reserved, must be tied LOW.
RSVD_A	56				Reserved Pin, leave unconnected.
NC	6,7,8,87, 93,100		—	—	No internal connection.
EVNODD	9	8 mA	LVTTL	Out	Indicates Even or Odd field for interfaced formats. Polarity programmable in register.

NOTE

The INT pin is programmable as either a push-pull LVTTL output, or as an open-drain output.

CLK48B is used to clock external 24-to-48 bit latches. CLK48B is also latched on the rising edge of RESET# to set the I²C device addresses for CSCL/CSDA. Refer to Table 11. CLK48B has a weak internal pull-down, and so will be latched as a LOW if not otherwise connected.

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -37

Q8501 : Sil9033 (HDMI Receiver)

TERMINAL DESCRIPTION (4/5) Differential Signal Data Pins

Pin Name	Pin #	Type	Description	
R0XC+	40	Analog	TMDS input clock pair.	HDMI Port 0
R0XC-	39	Analog		
R0X0+	44	Analog	TMDS input data pair.	
R0X0-	43	Analog		
R0X1+	48	Analog	TMDS input data pair.	
R0X1-	47	Analog		
R0X2+	52	Analog	TMDS input data pair.	
R0X2-	51	Analog		
R1XC+	59	Analog	TMDS input clock pair.	HDMI Port 1
R1XC-	58	Analog		
R1X0+	63	Analog	TMDS input data pair.	
R1X0-	62	Analog		
R1X1+	67	Analog	TMDS input data pair.	
R1X1-	66	Analog		
R1X2+	71	Analog	TMDS input data pair.	
R1X2-	70	Analog		

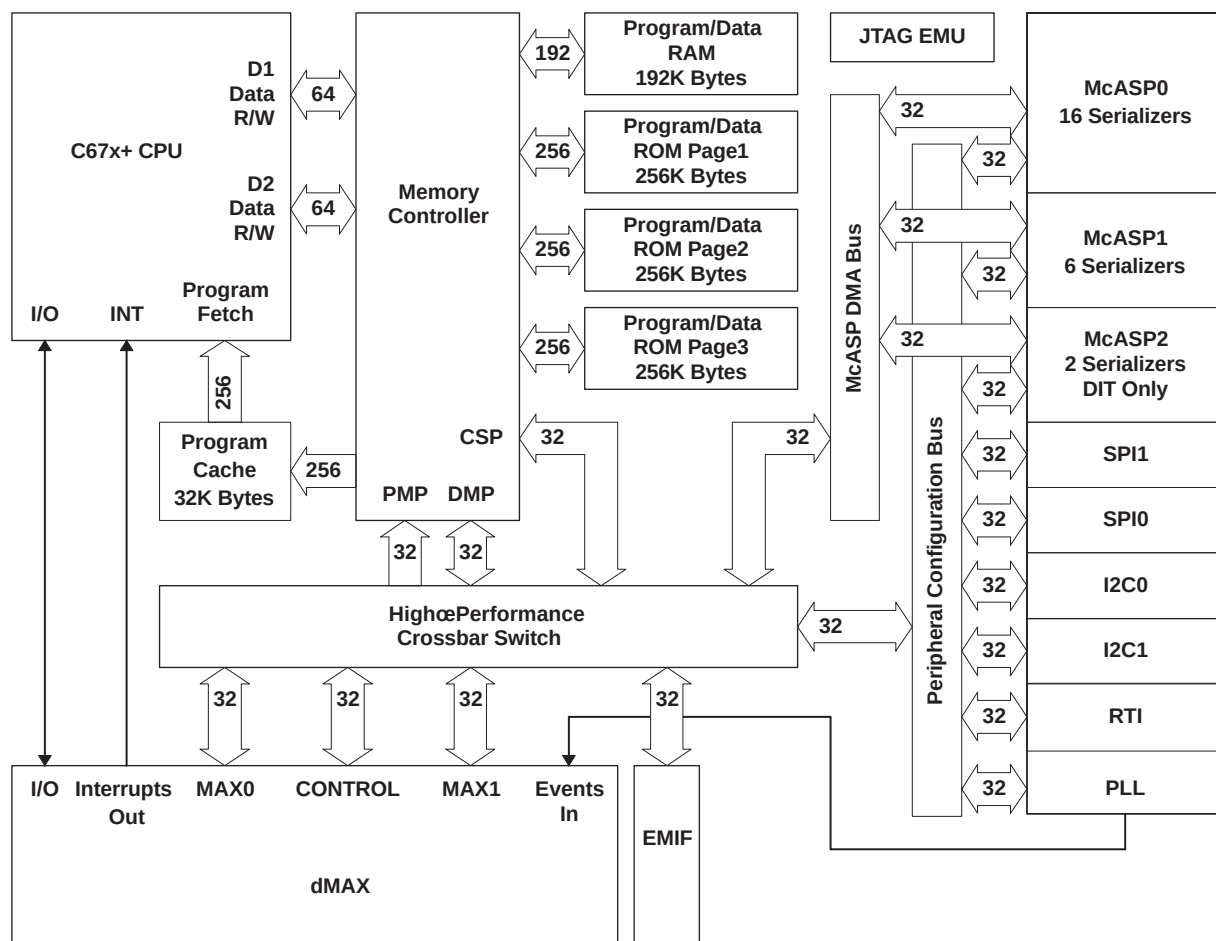
TERMINAL DESCRIPTION (5/5) Power and Ground Pins

Pin Name	Pin #	Type	Description	Supply
CVCC18	22, 23, 35, 74, 79, 92, 105, 114, 128, 139	Power	Digital Logic VCC	1.8V
CGND	21, 24, 36, 73, 80, 91, 106, 115, 127, 138	Ground	Digital Logic GND	
IOVCC	5, 16, 26, 76, 89, 109, 122, 134	Power	Input/Output Pin VCC	3.3V
IOGND	4, 15, 25, 75, 90, 108, 120, 135	Ground	Input/Output Pin GND	
AVCC	38, 42, 46, 50, 57, 61, 65, 69	Power	TMDS Analog VCC	3.3V
AGND	41, 45, 49, 53, 60, 64, 68, 72	Ground	TMDS Analog GND	
PVCC0	37	Power	TMDS Port 0 PLL VCC	3.3V
PVCC1	55	Power	TMDS Port 1 PLL VCC	3.3V
TMDSPGND	54	Ground	TMDS PLL GND	
AUDPVCC18	94	Power	ACR PLL VCC	1.8V
AUDPGND	95	Ground	ACR PLL GND	
XTALVCC	98	Power	ACR PLL Crystal Input VCC	3.3V
REGVCC	99	Power	ACR PLL Regulator VCC	3.3V

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -38

Q201 : TMS320DA707 (32 bit Floating-Point Digital Signal Processor)

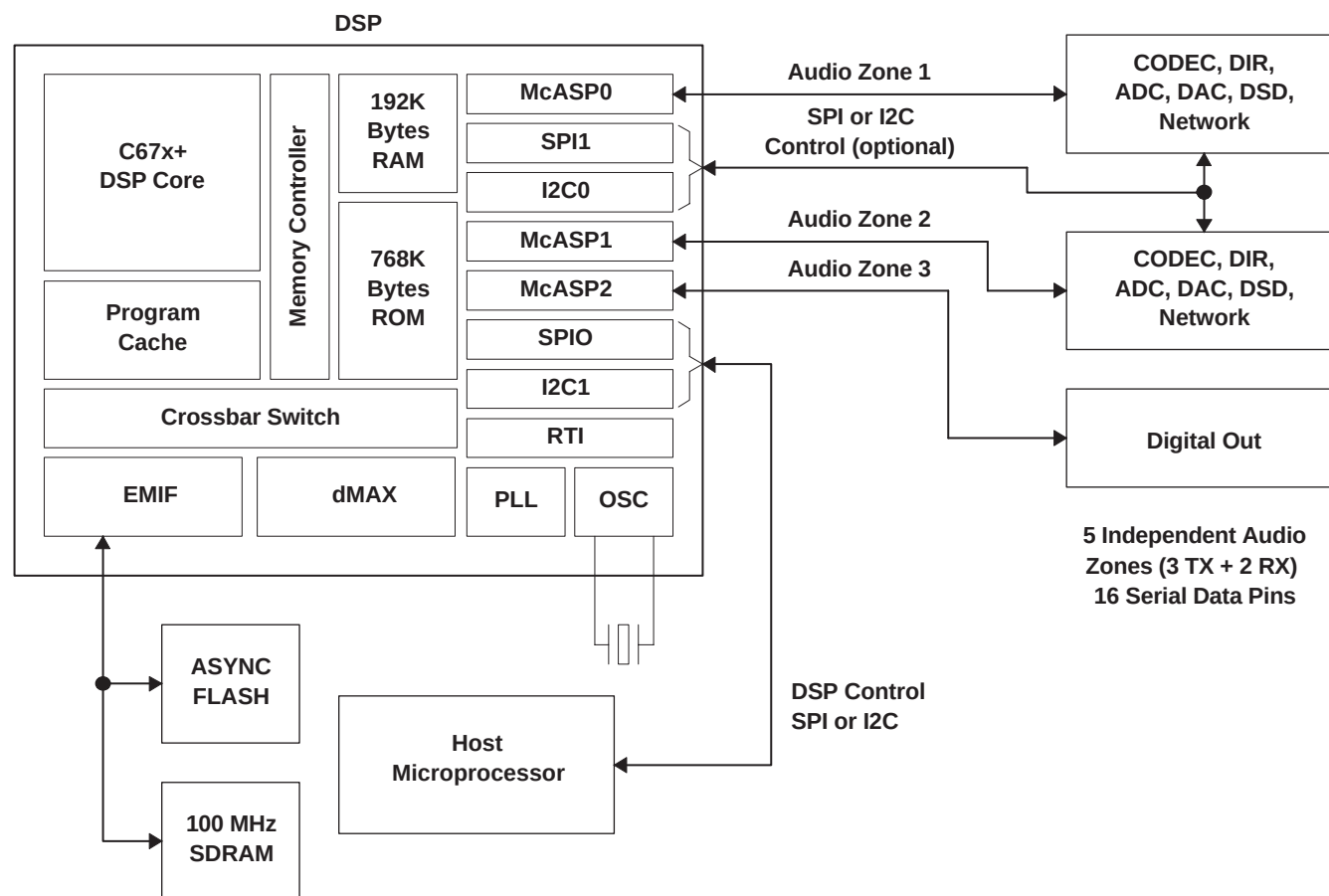
BLOCK DIAGRAM



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -39

Q201 : TMS320DA707 (32 bit Floating-Point Digital Signal Processor)

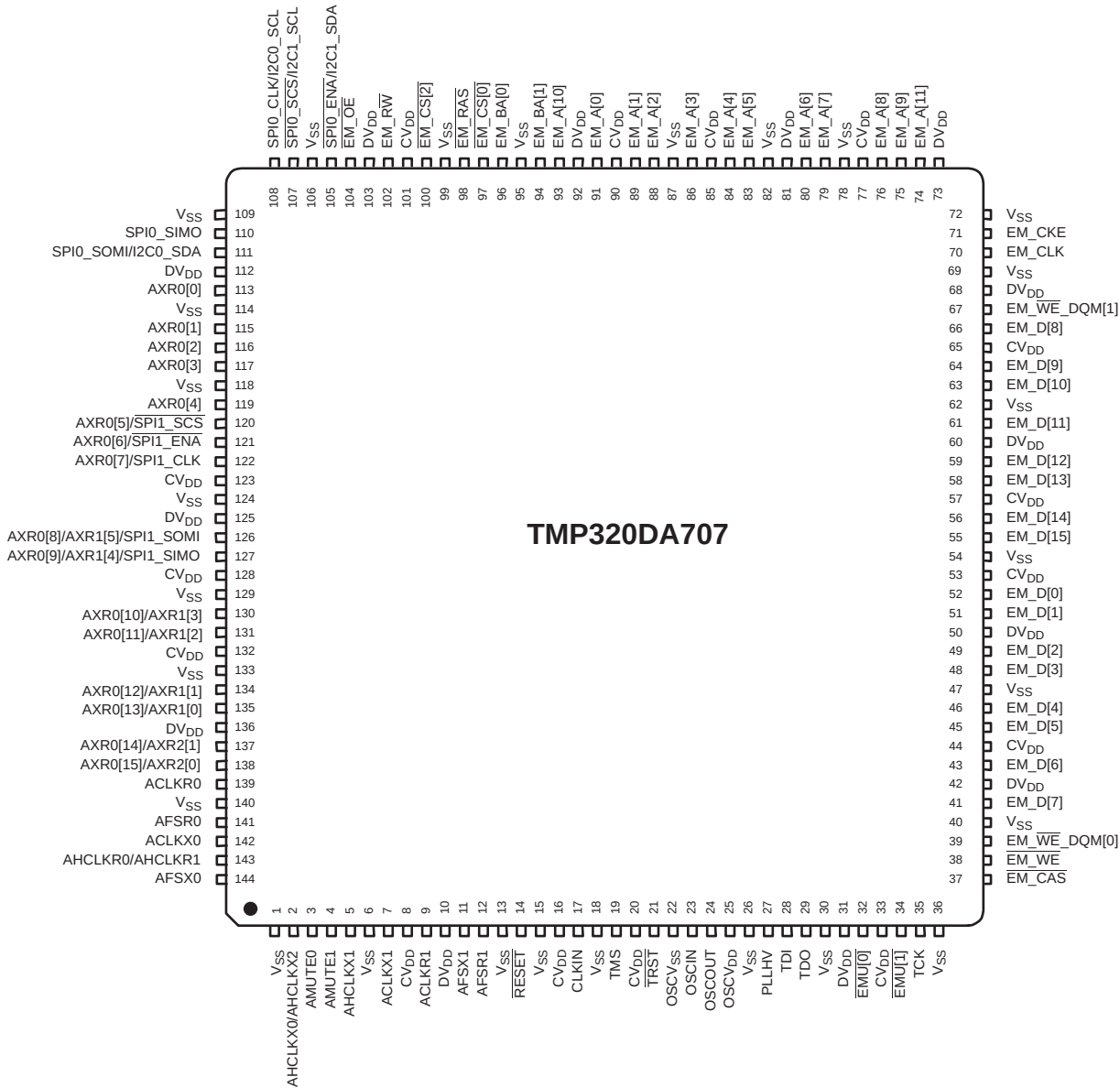
SYSTEM DIAGRAM with PERIPHERALS



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -40

Q201 : TMS320DA707 (32 bit Floating-Point Digital Signal Processor)

PIN CONFIGURATION



IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -41

Q201 : TMS320DA707 (32 bit Floating-Point Digital Signal Processor)

TERMINAL DESCRIPTION (1/4)

SIGNAL NAME	PIN NO.	TYPE ⁽¹⁾	PULL ⁽²⁾	GPIO ⁽³⁾	DESCRIPTION
External Memory Interface (EMIF) Address and Control					
EM_A[0]	91	O	-	N	EMIF Address Bus
EM_A[1]	89	O	-	N	
EM_A[2]	88	O	-	N	
EM_A[3]	86	O	-	N	
EM_A[4]	84	O	-	N	
EM_A[5]	83	O	-	N	
EM_A[6]	80	O	-	N	
EM_A[7]	79	O	-	N	
EM_A[8]	76	O	-	N	
EM_A[9]	75	O	-	N	
EM_A[10]	93	O	-	N	
EM_A[11]	74	O	-	N	
EM_BA[0]	96	O	-	N	SDRAM Bank Address and Asynchronous Memory Low-Order Address
EM_BA[1]	94	O	-	N	
$\overline{\text{EM\_CS}}[0]$	97	O	-	N	SDRAM Chip Select
$\overline{\text{EM\_CS}}[2]$	100	O	-	N	Asynchronous Memory Chip Select
$\overline{\text{EM\_CAS}}$	37	O	-	N	SDRAM Column Address Strobe
$\overline{\text{EM\_RAS}}$	98	O	-	N	SDRAM Row Address Strobe
$\overline{\text{EM\_WE}}$	38	O	-	N	SDRAM Write Enable
EM_CKE	71	O	-	N	SDRAM Clock Enable
EM_CLK	70	O	-	N	SDRAM Clock
$\overline{\text{EM\_WE\_DQM}}[0]$	39	O	-	N	Write Enable or Byte Enable for EM_D[7:0]
$\overline{\text{EM\_WE\_DQM}}[1]$	67	O	-	N	Write Enable or Byte Enable for EM_D[15:8]
$\overline{\text{EM\_OE}}$	104	O	-	N	SDRAM Output Enable
$\overline{\text{EM\_RW}}$	102	O	-	N	Asynchronous Memory Read/not Write

- (1) TYPE column refers to pin direction in functional mode. If a pin has more than one function with different directions, the functions are separated with a slash (/).
- (2) PULL column:
IPD = Internal Pulldown resistor
IPU = Internal Pullup resistor
- (3) If the GPIO column is 'Y', then in GPIO mode, the pin is configurable as an IO unless otherwise marked.

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -42
Q201 : TMS320DA707 (32 bit Floating-Point Digital Signal Processor)

TERMINAL DESCRIPTION (2/4)

SIGNAL NAME	PIN NO.	TYPE ⁽¹⁾	PULL ⁽²⁾	GPIO ⁽³⁾	DESCRIPTION
External Memory Interface (EMIF) Data Bus					
EM_D[0]	52	IO	-	N	EMIF Data Bus [Lower 16 Bits]
EM_D[1]	51	IO	-	N	
EM_D[2]	49	IO	-	N	
EM_D[3]	48	IO	-	N	
EM_D[4]	46	IO	-	N	
EM_D[5]	45	IO	-	N	
EM_D[6]	43	IO	-	N	
EM_D[7]	41	IO	-	N	
EM_D[8]	66	IO	-	N	
EM_D[9]	64	IO	-	N	
EM_D[10]	63	IO	-	N	
EM_D[11]	61	IO	-	N	
EM_D[12]	59	IO	-	N	
EM_D[13]	58	IO	-	N	
EM_D[14]	56	IO	-	N	
EM_D[15]	55	IO	-	N	

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -43

Q201 : TMS320DA707 (32 bit Floating-Point Digital Signal Processor)

TERMINAL DESCRIPTION (3/4)

SIGNAL NAME	PIN NO.	TYPE ⁽¹⁾	PULL ⁽²⁾	GPIO ⁽³⁾	DESCRIPTION
McASP0, McASP1, McASP2, and SPI1 Serial Ports					
AHCLKR0/AHCLKR1	143	IO	-	Y	McASP0 and McASP1 Receive Master Clock
ACLKR0	139	IO	-	Y	McASP0 Receive Bit Clock
AFSR0	141	IO	-	Y	McASP0 Receive Frame Sync (L/R Clock)
AHCLKX0/AHCLKX2	2	IO	-	Y	McASP0 and McASP2 Transmit Master Clock
ACLKX0	142	IO	-	Y	McASP0 Transmit Bit Clock
AFSX0	144	IO	-	Y	McASP0 Transmit Frame Sync (L/R Clock)
AMUTE0	3	O	-	Y	McASP0 MUTE Output
AXR0[0]	113	IO	-	Y	McASP0 Serial Data 0
AXR0[1]	115	IO	-	Y	McASP0 Serial Data 1
AXR0[2]	116	IO	-	Y	McASP0 Serial Data 2
AXR0[3]	117	IO	-	Y	McASP0 Serial Data 3
AXR0[4]	119	IO	-	Y	McASP0 Serial Data 4
AXR0[5]/SPI1_SCS	120	IO	-	Y	McASP0 Serial Data 5 or SPI1 Slave Chip Select
AXR0[6]/SPI1_ENA	121	IO	-	Y	McASP0 Serial Data 6 or SPI1 Enable (Ready)
AXR0[7]/SPI1_CLK	122	IO	-	Y	McASP0 Serial Data 7 or SPI1 Serial Clock
AXR0[8]/AXR1[5]/SPI1_SOMI	126	IO	-	Y	McASP0 Serial Data 8 or McASP1 Serial Data 5 or SPI1 Data Pin Slave Out Master In
AXR0[9]/AXR1[4]/SPI1_SIMO	127	IO	-	Y	McASP0 Serial Data 9 or McASP1 Serial Data 4 or SPI1 Data Pin Slave In Master Out
AXR0[10]/AXR1[3]	130	IO	-	Y	McASP0 Serial Data 10 or McASP1 Serial Data 3
AXR0[11]/AXR1[2]	131	IO	-	Y	McASP0 Serial Data 11 or McASP1 Serial Data 2
AXR0[12]/AXR1[1]	134	IO	-	Y	McASP0 Serial Data 12 or McASP1 Serial Data 1
AXR0[13]/AXR1[0]	135	IO	-	Y	McASP0 Serial Data 13 or McASP1 Serial Data 0
AXR0[14]/AXR2[1]	137	IO	-	Y	McASP0 Serial Data 14 or McASP2 Serial Data 1
AXR0[15]/AXR2[0]	138	IO	-	Y	McASP0 Serial Data 15 or McASP2 Serial Data 0
ACLKR1	9	IO	-	Y	McASP1 Receive Bit Clock
AFSR1	12	IO	-	Y	McASP1 Receive Frame Sync (L/R Clock)
AHCLKX1	5	IO	-	Y	McASP1 Transmit Master Clock
ACLKX1	7	IO	-	Y	McASP1 Transmit Bit Clock
AFSX1	11	IO	-	Y	McASP1 Transmit Frame Sync (L/R Clock)
AMUTE1	4	O	-	Y	McASP1 MUTE Output
SPI0, I2C0, and I2C1 Serial Port Pins					
SPI0_SOMI/I2C0_SDA	111	IO	-	Y	SPI0 Data Pin Slave Out Master In or I2C0 Serial Data
SPI0_SIMO	110	IO	-	Y	SPI0 Data Pin Slave In Master Out
SPI0_CLK/I2C0_SCL	108	IO	-	Y	SPI0 Serial Clock or I2C0 Serial Clock
SPI0_SCS/I2C1_SCL	107	IO	-	Y	SPI0 Slave Chip Select or I2C1 Serial Clock
SPI0_ENA/I2C1_SDA	105	IO	-	Y	SPI0 Enable (Ready) or I2C1 Serial Data

IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -44

Q201 : TMS320DA707 (32 bit Floating-Point Digital Signal Processor)

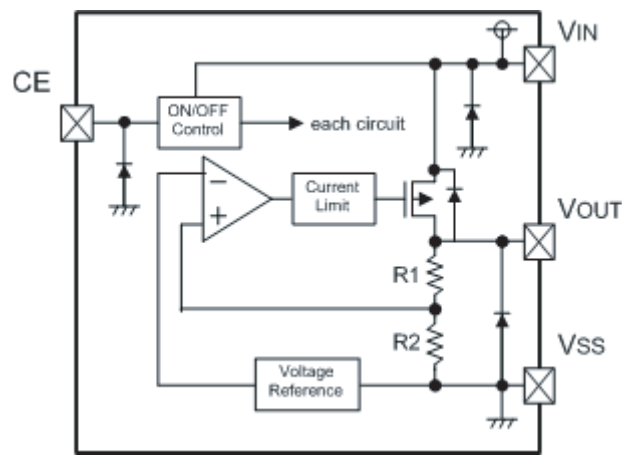
TERMINAL DESCRIPTION (4/4)

SIGNAL NAME	PIN NO.	TYPE ⁽¹⁾	PULL ⁽²⁾	GPIO ⁽³⁾	DESCRIPTION
Clocks					
OSCIN	23	I	-	N	1.2-V Oscillator Input
OSCOUT	24	O	-	N	1.2-V Oscillator Output
OSCV _{DD}	25	PWR	-	N	Oscillator 1.2-V V _{DD} tap point (for filter only)
OSCV _{SS}	22	PWR	-	N	Oscillator V _{SS} tap point (for filter only)
CLKIN	17	I	-	N	Alternate clock input (3.3-V LVCMOS Input)
PLLHV	27	PWR	-	N	PLL 3.3-V Supply Input (requires external filter)
Device Reset					
RESET	14	I	-	N	Device reset pin
Emulation/JTAG Port					
TCK	35	I	IPU	N	Test Clock
TMS	19	I	IPU	N	Test Mode Select
TDI	28	I	IPU	N	Test Data In
TDO	29	OZ	IPU	N	Test Data Out
TRST	21	I	IPD	N	Test Reset
EMU[0]	32	IO	IPU	N	Emulation Pin 0
EMU[1]	34	IO	IPU	N	Emulation Pin 1
Power Pins					
Core Supply (CV _{DD})	8, 16, 20, 33, 44, 53, 57, 65, 77, 85, 90, 101, 123, 128, 132				
IO Supply (DV _{DD})	10, 31, 42, 50, 60, 68, 73, 81, 92, 103, 112, 125, 136				
Ground (V _{SS})	1, 6, 13, 15, 18, 26, 30, 36, 40, 47, 54, 62, 69, 72, 78, 82, 87, 95, 99, 106, 109, 114, 118, 124, 129, 133, 140				

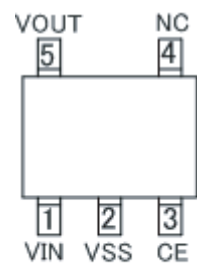
IC BLOCK DIAGRAMS AND TERMINAL DESCRIPTIONS -45

Q8404,Q8602 : XC6213B332MR (Regulator with high-speed ON/OFF switch)

BLOCK DIAGRAM



PIN CONFIGURATION



SOT-25
(TOP VIEW)

TERMINAL DESCRIPTION

PIN NO	PIN NAME	FUNCTION
1	VIN	INPUT
2	VSS	GND
3	CE	ON/OFF CONTROL PIN
4	NC	NOT USED
5	VOUT	OUTPUT

MICROPROCESSOR TERMINAL DESCRIPTIONS

Q701: M30627FHPGP

No.	Pin Name	Function	I/O	Act.	Description
1	Vref	Vref			A/D Reference Voltage (Vcc)
2	AVcc	AVcc			A/D Power supply
3	P97/~ADTRG/SIN4	VMSDI	I	H	Data input pin from HDMI microprosessor
4	P96/ANEX1/SOUT4	VMSDO	O	H	Data output pin to HDMI microprosessor
5	P95/ANEX0/CLK4	VMCLK	O	CLK	Clock output pin to HDMI microprosessor
6	P94/DA1/TB4IN	VCRST	O	H	Reset cotrol pin to Video Encoder/Decoder
7	P93/DA0/TB3IN	~VMUT	O	L	VIDEO MUTE control pin
8	P92/TB2IN/SOUT3	OSDSO	O	H	Data output pin to OSD
9	P91/TB1IN/SIN3	SYNC	I	H	VIDEO SYNC detect pin
10	P90/TB0IN/CLK3	OSDCLK	O	CLK	Clock output pin to OSD
11	P141	~OSDCS	O	L	OSD chip select pin
12	P140		O	H	No use
13	BYTE	BYTE			External bus width select pin. Connect to Ground.
14	CNVSS	CNVss			Processor mode select pin. Connect to the ground via resistor.
15	P87/XCIN	RDSDATA	I	H	RDS data input from LA72725 in tuner pack
16	P86/XCOUT	XMSRSEL	O	H	XM/SIRIUS select pin
17	~RESET	~RESET	I	L	Reset input
18	XOUT	Xout			Ceramic oscillator connection pin.
19	VSS	Vss			Power supply Ground pin
20	XIN	Xin			Ceramic oscillator connection pin.
21	VCC1	Vcc1			Power supply pin
22	P85/~NMI	~NMI	I	L	No use
23	P84/~INT2	POFF	I	L	Power failure detection input
24	P83/~INT1	VSYN	I	L	Vertical sync signal detection input.
25	P82/~INT0	~XMERRIRQ/~RDSCLK	I	L	(D-type)XM IC interrupt input / (P-type)RDS clock input / (Other type)No use
26	P81/TA4IN/~U	XMCOMSEL	O	H	Control output to XM IC
27	P80/TA4OUT/U	~XMDACRST	O	L	XM DAC reset pin
28	P77/TA3IN	~DIRINT0	I	H	DIR/Codec unlock detect pin
29	P76/TA3OUT	DSPCLK	O	L	Clock output for DSP
30	P75/TA2IN/~W	~DSPINT2	I	L	DSP BUSY detect pin
31	P74/TA2OUT/W	~DSPINT1	I	L	DSP DEC detect pin
32	P73/~CTS2/~RTS2/TA1IN/~V	~DSPINT0	I	L	DSP NIC detect pin
33	P72/CLK2/TA1OUT/V	~SDET	I	L	S-VIDEO detect pin
34	P71/RXD2/SCL2/TA0IN/TB5IN	VDSC/LPLLSC	O	CLK	I2C clock output to tuner pack
35	P70/TXD2/SDA2/TA0OUT	VDSDA/PLLSDA	I/O	H	I2C data input/output from/to tuner pack
36	P67/TXD1/SDA1	FTXD	O	H	Flash microprocessor rewrite port
37	Vcc1			H	
38	P66/RXD1/SCL1	FRXD	I	H	Flash microprocessor rewrite port
39	Vss			H	
40	P65/CLK1	FCLK	O	CLK	Flash microprocessor rewrite port
41	P64/~CTS1/~RTS1/~CTS0/CLKS1	FBUSY	O	H	Flash microprocessor rewrite port
42	P63/TXD0/SDA0	XMSRTXD	O	H	XM/SIRIUS data output pin
43	P62/RXD0/SCL0	XMSRRXD	I	H	XM/SIRIUS data input pin
44	P61/CLK0	~XMRST	O	L	XM IC reset pin
45	P60/~CTS0/~RTS0	~DIRCS	O	L	DIR/Codec chip select pin
46	P137	OSDINV	O	H	OSD IC input select pin(Video)
47	P136	OSDINY	O	H	OSD IC input select pin(S Video)
48	P135		O	H	No use
49	P134		O	H	No use
50	P57/~RDY/CLKOUT	~DIRRST	O	L	DIR/Codec reset pin
51	P56/ALE	~DSPCS	O	L	DSP chip select pin
52	P55/~HOLD	~FEPM	O	H	Flash microprocessor rewrite port
53	P54/~HLDA	~DSPRST	O	L	DSP reset pin
54	P133		O	H	No use
55	P132		O	H	No use
56	P131	MCHSEL	O	H	ANALOG/HDMI MCLK select pin
57	P130		O	H	No use
58	P53/BCLK	DIGCLK	O	CLK	DIR/Codec/DSP clock output pin
59	P52/~RD	DIGSDI	I	H	DIR/Codec/DSP data input pin
60	P51/~WRH/~BHE	DIGSDO	O	H	DIR/Codec/DSP data output pin
61	P50/~WRL/~WR	~FCE	I	H	Flash microprocessor rewrite port
62	P127		O	H	No use
63	P126	Z2MUT	O	H	Mute control output for ZONE2
64	P125	SBZ2MUT	O	H	Mute control output for SB/ZONE2

MICROPROCESSOR TERMINAL DESCRIPTIONS

Q701: M30627FHPGP

No.	Pin Name	Function	I/O	Act.	Description
65	P47/~CS3	AMUT	O	H	Audio mute control pin
66	P46/~CS2	SPRLZ2	O	H	ZONE speaker relay control pin
67	P45/~CS1	SPRLSB	O	H	Surround Back speaker relay control pin
68	P44/~CS0	SPRLCS	O	H	Center/Surround Back speaker relay control pin
69	P43/A19	SPRLF	O	H	Front speaker relay control pin
70	P42/A18		O	H	No use
71	P41/A17	VOLDATA	O	H	Data output to R2S15211
72	P40/A16	VOLCLK	O	ELK	Clock output to R2S15211
73	P37/A15		O	H	No use
74	P36/A14	VPOWER	O	H	Power control output to video section
75	P35/A13	APOWER	O	H	Power source control output
76	P34/A12	~POFF2	I	L	POFF detect pin
77	P33/A11	~FANH	O	L	No use
78	P32/A10	~FANCTRL	O	L	No use
79	P31/A09	TRGZ2	O	H	ZONE 12V trigger output
80	P124	TRGB	O	H	No use
81	P123	TRGA	O	H	No use
82	P122	Z2VOLMUT	O	H	No use
83	P121	Z2VOLCLK	O	H	No use
84	P120	Z2VOLDAT	O	H	No use
85	VCC2	Vcc2			Power supply
86	P30/A8(/-/D7)	SEC1H	O	H	Voltage-select control pin
87	VSS	Vss			Power supply Ground
88	P27/AN27/A7(/D7/D6)	PROTECT	I	H	Protection detect pin
89	P26/AN26/A6(/D6/D5)	VOLH	I	A/D	Signal level protection detect pin
90	P25/AN25/A5(/D5/D4)	THERMAL	I	A/D	Thermal protection detect pin
91	P24/AN24/A4(/D4/D3)	INIT3	I	A/D	Initializing pin 3
92	P23/AN23/A3(/D3/D2)	INIT2	I	A/D	Initializing pin 2
93	P22/AN22/A2(/D2/D1)	INIT1	I	A/D	Initializing pin 1
94	P21/AN21/A1(/D1/D0)	BAND	I	A/D	Initializing pin for tuner frequency
95	P20/AN20/A0(/D0/-)	~SYSOUT	O	L	RI output pin
96	P17/D15/~INT5	SYSIN	I	H	RI input pin
97	P16/D14/~INT4	~IRIN	I	L	IRIN remote control input pin
98	P15/D13/~INT3	~REMIN	I	L	Remote controller signal input pin
99	P14/D12	~STEREO	I	H	FM Stereo detect pin
100	P13/D11	~SD	I	H	FM/AM TUNED detect pin
101	P12/D10	HPDET	I	H	Headphone detection input
102	P11/D9	VOLB	I	H	Master volume rotary encoder input
103	P10/D8	VOLA	I	H	Master volume rotary encoder input
104	P07/AN07/D7		O	H	No use
105	P06/AN06/D6	LEDZONE2	O	H	Zone LED control pin
106	P05/AN05/D5		O	H	No use
107	P04/AN04/D4	LEDSTBY	O	H	STANDBY LED control pin
108	P03/AN03/D3	FLDSDO	O	H	Serial data output for FL driver
109	P02/AN02/D2	FLDCLK	O	ELK	Serial clock output for FL driver
110	P01/AN01/D1	~FLDCS	O	L	Chip select output for FL driver
111	P00/AN00/D0	~FLDRST	O	L	Reset output for FL driver
112	P117	~MICDET	I	L	Microphone detection input
113	P116	MICMUT	O	H	Microphone mute output
114	P115		O	H	No use
115	P114		O	H	No use
116	P113	~VMRST	O	L	HDMI microprocessor reset pin
117	P112	VMSTB	I	H	HDMI microprocessor strobe input
118	P111	TXMUTE	O	H	HDMI microprocessor mute pin
119	P110	RXMUTE	I	H	HDMI microprocessor RXMUTE detect pin
120	P107/AN7/~KI3	~KEYINT3	I	L	Key input interrupt 3
121	P106/AN6/~KI2	~KEYINT2	I	L	Key input interrupt 2
122	P105/AN5/~KI1	~KEYINT1	I	L	Key input interrupt 1
123	P104/AN4/~KI0	~KEYINT0	I	L	Key input interrupt 0
124	P103/AN3	KEY	I	A/D	Key input 3
125	P102/AN2	KEY	I	A/D	Key input 2
126	P101/AN1	KEY	I	A/D	Key input 1
127	AVIS	AVss			Ground for A/D
128	P100/AN0	KEY	I	A/D	Key input 0

ADJUSTMENT PROCEDURE-1

IDLING CURRENT ADJUSTMENT

[When]

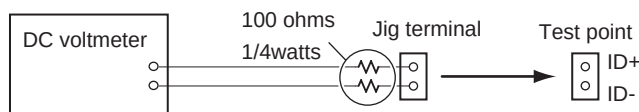
Exchange Power transistor (Q6050 - Q6054, Q6060 - Q6064) and Amplifier PC board (NAAF-8911).

[Procedure]

<Note> **No load and No signal**

Refer to <Fig-1> in " ADJUSTMENT PROCEDURES-2 " for the adjustment points and the test points.

1. Before idling adjustment, turn the trimming resistors to counter clockwise.
2. Connect the dc voltmeter to test points,
using two 100 ohm resistors between the poles of the jig terminal and the dc voltmeter terminals.



3. Connect the ac power cord to wall outlet.
4. Press the STANDBY/ON button to turn the power on.
5. Adjust the trimming resistors as the following procedure immediately after power on.

Channel	Mark	Adjustment point (Trimming resistor)	Measuring point (Test point)	Adjustment value
Center	C	R6040	P6080	2.5 mV
Front Left	L	R6041	P6081	2.5 mV
Front Right	R	R6042	P6082	2.5 mV
Surround Left	SL	R6043	P6083	1.5 mV
Surround Right	SR	R6044	P6084	1.5 mV

6. Wait for 4 - 6 minutes. (Heat running)
7. Re-adjust the trimming resistors as the following procedure.

Channel	Adjustment point	Measured value	Adjustment value	Specifications (* In a stable state)
Front Left, Right and Center	R6041, R6042 and R6040	In case below 9 mV	→ 9 mV	12 +/- 3 mV
		In case 9 - 11 mV	→ Leave it as it is	
		In case over 11 mV	→ 11 mV	
Surround Left Surround Right	R6043, R6044	In case below 6 mV	→ 6 mV	9 +/- 3 mV
		In case 6 - 8 mV	→ Leave it as it is	
		In case over 8 mV	→ 8 mV	

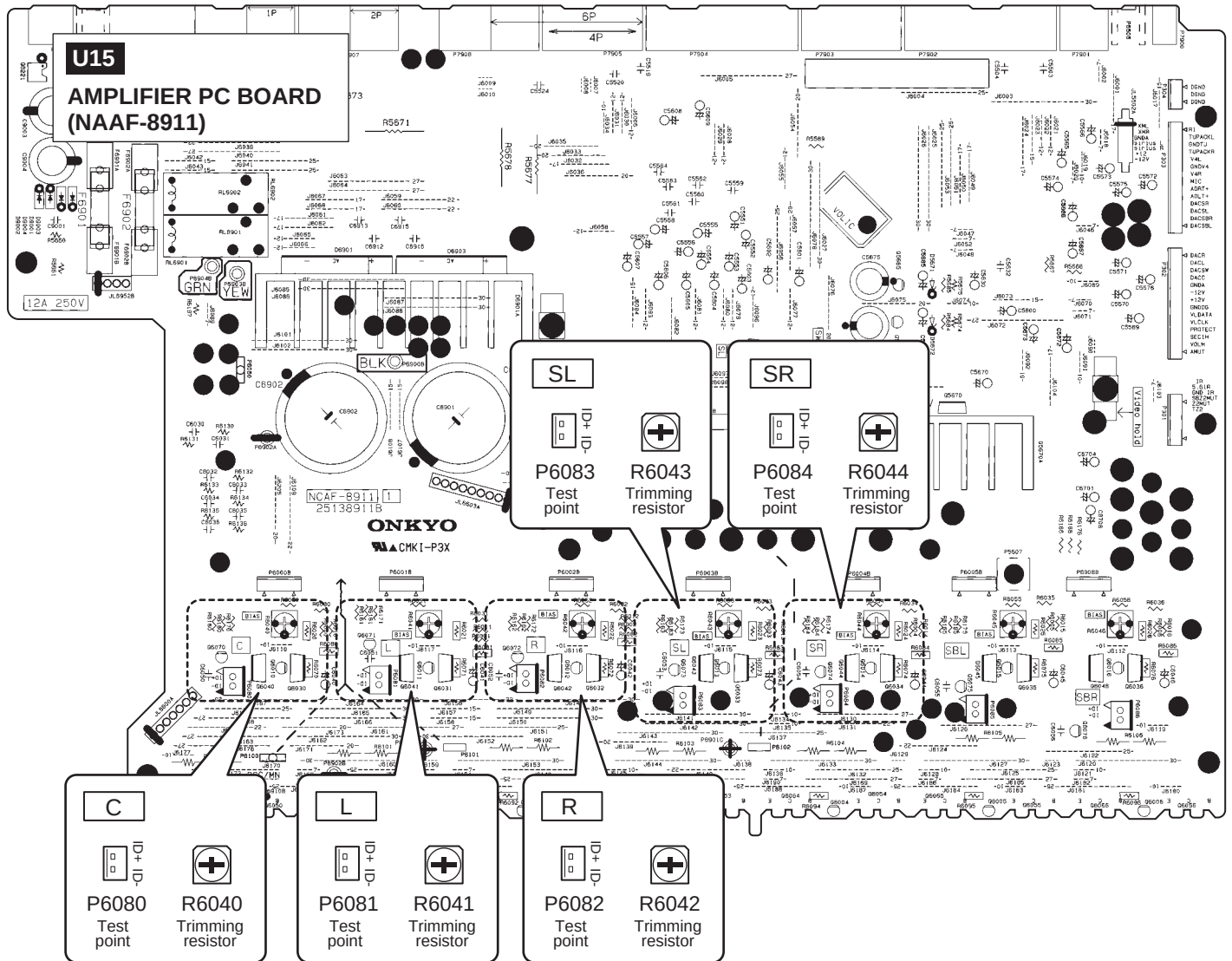
8. Disconnect the dc voltmeter.
9. Press the STANDBY/ON button to turn the power off.
10. Disconnect the ac power cord.

* Idling currents are stabilized in about 10 minutes after power on.

ADJUSTMENT PROCEDURE-2

IDLING CURRENT ADJUSTMENT

<Fig-1>



<Note>

Parts marked by 'NSP' are generally unavailable because they are not in our Master Spare Parts List.

NOTE : THE COMPONENTS IDENTIFIED BY THE MARK
! ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH PART
NUMBER SPECIFIED.

<Notes>

(B) : Black model

(S) : Silver model

<DD>: HT-R640 USA model

<PP>: HT-R640 European model

EXPLODED VIEW PARTS LIST

REF. NO.	NAME	DESCRIPTION	Q'TY	PART NO(SN)	REMARKS
A001	F BRACKET	.	1	27111452A	<DD>
A001	F BRACKET	.	1	27111454A	<PP>
A002	SCREW	3TTB+8B(3CM)SR	27	801637	
A013	WIRE TIE	BSK-1	7	260208	
A015	CHASSIS	.	1	---	NSP
A016	SCREW	3TTB+8B(CU)SR	9	801618	
A017	WIRE TIE	BINDER(CLAMPER)UL	2	260258	
A018	HOLDER	KGLS-22S	1	27190369	
A020	HOLDER	KGLS-16RT	2	27190511	
A021	HOLDER	KGPS-16RF	4	27190991	
A022	HOLDER	KGLS-10RT	1	27190428A	
A028	CLIP	CS-1U	1	27255004	
A030	SCREW	4TTC+8C(3BC)	4	830440089GR	
A031	SPACER	.	1	27270439	
A033	LABEL	(PT)	1	29363379-1	
A035	HOLDER	KGLS-14RT	1	27190524	
A036	SCREW	3TTB+8B(CU)	1	801612	
A037	BUSHING	S-RELIEF #2271	1	27300750	!
A040	HEAT SINK	.	1	27160589	
A041	RETAINER	(HL)	1	27142023	
A042	RETAINER	(HR)	1	27142024	
A044	TAPE	TAPE(CLOTH-8U)	1	29110082	
A045	HOLDER	KGLS-5RT	2	27191156	
A049	SCREW	3SMS8W.SW+14B(CU)	14	801634	
A050	IB CUSHION	W15*3t TAPE	1	28141585	
A051	TAPE	TAPE(CLOTH-16U)	1	29110083	
A052	CUSHION	.	1	28141697	
A053	CUSHION	.	1	28141701	
A055	FACET	(VOL)	1	28200016	
A060	COVER	(B)	1	28184972	<DD>
A060	COVER	(S)	1	28184973	<PP>
A061	SCREW	3TTB+8B(3BC)	6	838430088GR	<DD>>
A061	SCREW	3TTB+8B(3CM)SR	6	801637	<PP>
A062	CUSHION	.	1	28141681	
A065	BOTTOM LEG	.	4	27175432B	
A066	CUSHION	.	4	28141700	
A070	CLEAR PLT	.	1	28192102	<DD>
A070	CLEAR PLT	.	1	28192103	<PP>
A071	CUSHION	.	3	28141688	
A073	F PANEL	R640(B)	1	27212929A	<DD>
A073	F PANEL	R640(S)	1	27212930	<PP>
A077	BADGE	.	1	28135298	<PP>
A077	BADGE	BADGE	1	28135244	<DD>
A081	FACET	FACET	1	28198778	<DD>
A081	FACET	FACET	2	28198778	<PP>
A089	SCREW	3TTB+8B(3BC)	3	838430088GR	
A093	REAR PANEL	R640MDD	1	27123618B	<DD>
A093	REAR PANEL	R640MPP	1	27123619	<PP>
A097	SCREW	3TTB+8B(3BC)	38	838430088GR	<DD>
A097	SCREW	3TTB+8B(3BC)	37	838430088GR	<PP>
A102	LABEL	(COVER)	1	29364123	
A109	LABEL	HOOKUP-ONKYO	1	29363194	<DD>
A110	KNOB	(VOL)AS	1	28326289	<DD>
A110	KNOB	(VOL)AS	1	28326295	<PP>
A112	CUSHION	.	4	28141637	
F6901	FUSE	12A-TUL-250V	1	252301GR	!
F6902	FUSE	12A-TUL-250V	1	252301GR	!
F901	FUSE	10A-UL/T-233	1	252330GR	!,<DD>
F901 or	FUSE	10A-T/UL-ST2	(1)	252333GR	!,<DD>

F901	FUSE	5A-SE-EAK FUSE	1	252078GR	!,<PP>
F901 or	FUSE	5A-SE-TL250V	(1)	252278GR	!,<PP>
F903	FUSE	5A-UL/T-233	1	252326GR	!,<DD>
F903 or	FUSE	5A-T/UL-ST2	(1)	252258GR	!,<DD>
F903	FUSE	2.5A-SE-EAK FUSE	1	252075GR	!,<PP>
F903 or	FUSE	2.5A-SE-TL250V	(1)	252275GR	!,<PP>
F910	FUSE	5A-UL/T-233	1	252326GR	!,<DD>
F910 or	FUSE	5A-T/UL-ST2	(1)	252258GR	!,<DD>
F910	FUSE	5A-UL/T-233	1	252326GR	!,<PP>
F910 or	FUSE	5A-T/UL-ST2	(1)	252258GR	!,<PP>
P101	FFC	NCFC7-131012	1	2047131012	
P6601A	P RIVET	JB-407A-C	6	880052	<PP>
P6602A	P RIVET	JB-407A-C	8	880052	<PP>
P6607A	P RIVET	JB-407A-C	4	880052	<PP>
P701	FFC	NCFC3-36023	1	204336023	
P901	AC CORD	AS-UC-2	1	253333VOL	!,<DD>
P901 or	AC CORD	AS-UC-2	(1)	253368LTK	!,<DD>
P901 or	AC CORD	AS-UC-2	(1)	253368YUN	!,<DD>
P901	AC CORD	AS-CEE-2	1	253306VOL	!,<PP>
P901 or	AC CORD	AS-CEE-2	(1)	253374LTK	!,<PP>
P901 or	AC CORD	AS-CEE-2	(1)	253374YUN	!,<PP>
Q6050	TR	MN130S-O	1	2203663	<DD>
Q6050 or	TR	MN130S-P	(1)	2203666	<DD>
Q6050 or	TR	MN130S-Y	(1)	2203664	<DD>
Q6050	TR	2SC5242-O	1	2202843	<PP>
Q6050 or	TR	2SC5242-R	(1)	2202842	<PP>
Q6050A	ISO SHEET	AC238	1	223024	
Q6050B	ISO SHEET	ISO SHEET	5	223041	
Q6051	TR	MN130S-O	1	2203663	<DD>
Q6051 or	TR	MN130S-P	(1)	2203666	<DD>
Q6051 or	TR	MN130S-Y	(1)	2203664	<DD>
Q6051	TR	2SC5242-O	1	2202843	<PP>
Q6051 or	TR	2SC5242-R	(1)	2202842	<PP>
Q6052	TR	MN130S-O	1	2203663	<DD>
Q6052 or	TR	MN130S-P	(1)	2203666	<DD>
Q6052 or	TR	MN130S-Y	(1)	2203664	<DD>
Q6052	TR	2SC5242-O	1	2202843	<PP>
Q6052 or	TR	2SC5242-R	(1)	2202842	<PP>
Q6053	TR	MN130S-O	1	2203663	<DD>
Q6053 or	TR	MN130S-P	(1)	2203666	<DD>
Q6053 or	TR	MN130S-Y	(1)	2203664	<DD>
Q6053	TR	2SC5242-O	1	2202843	<PP>
Q6053 or	TR	2SC5242-R	(1)	2202842	<PP>
Q6054	TR	MN130S-O	1	2203663	<DD>
Q6054 or	TR	MN130S-P	(1)	2203666	<DD>
Q6054 or	TR	MN130S-Y	(1)	2203664	<DD>
Q6054	TR	2SC5242-O	1	2202843	<PP>
Q6054 or	TR	2SC5242-R	(1)	2202842	<PP>
Q6060	TR	MP130S-O	1	2203673	<DD>
Q6060 or	TR	MP130S-P	(1)	2203676	<DD>
Q6060 or	TR	MP130S-Y	(1)	2203674	<DD>
Q6060	TR	2SA1962-O	1	2202833	<PP>
Q6060 or	TR	2SA1962-R	(1)	2202832	<PP>
Q6061	TR	MP130S-O	1	2203673	<DD>
Q6061 or	TR	MP130S-P	(1)	2203676	<DD>
Q6061 or	TR	MP130S-Y	(1)	2203674	<DD>
Q6061	TR	2SA1962-O	1	2202833	<PP>
Q6061 or	TR	2SA1962-R	(1)	2202832	<PP>
Q6062	TR	MP130S-O	1	2203673	<DD>
Q6062 or	TR	MP130S-P	(1)	2203676	<DD>
Q6062 or	TR	MP130S-Y	(1)	2203674	<DD>
Q6062	TR	2SA1962-O	1	2202833	<PP>
Q6062 or	TR	2SA1962-R	(1)	2202832	<PP>
Q6063	TR	MP130S-O	1	2203673	<DD>
Q6063 or	TR	MP130S-P	(1)	2203676	<DD>
Q6063 or	TR	MP130S-Y	(1)	2203674	<DD>
Q6063	TR	2SA1962-O	1	2202833	<PP>
Q6063 or	TR	2SA1962-R	(1)	2202832	<PP>
Q6064	TR	MP130S-O	1	2203673	<DD>
Q6064 or	TR	MP130S-P	(1)	2203676	<DD>
Q6064 or	TR	MP130S-Y	(1)	2203674	<DD>
Q6064	TR	2SA1962-O	1	2202833	<PP>
Q6064 or	TR	2SA1962-R	(1)	2202832	<PP>

<Notes>

When replacing the following the transistors, use ones of the same Hfe rank as the original type.

Ref. No. : Q6050 - 6060, Q6051 - 6061, Q6052 - 6062, Q6053 - 6063, Q6054 - 6064, Q6055 - 6065, Q6056 - 6066

T901	P TRANS	NPT-1518D	1	2301805	!,<DD>
T901	P TRANS	NPT-1518P	1	2301806	!,<PP>
U01	DISPLAY PC board ass'y	NADIS-8785-1T	1	1B126585-1T	<DD>
		NADIS-8785-1U	1	1B126585-1U	<PP>
U02	SWITCH PC board ass'y	NADIS-8786-1T	1	1B126586-1T	<DD>
		NADIS-8786-1U	1	1B126586-1U	<PP>
U03	POWER SUPPLY PC board ass'y	NAPS-8787-1T	1	1B126587-1T	<DD>
		NAPS-8787-1U	1	1B126587-1U	<PP>
U04	SEC. TERMINAL-1 PC board ass'y	NAETC-8788-1T	1	1B126588-1T	<DD>
		NAETC-8788-1U	1	1B126588-1U	<PP>
U05	FRONT OPT PC board ass'y	NAETC-8789-1T	1	1B126589-1T	<DD>
		NAETC-8789-1U	1	1B126589-1U	<PP>
U06	HEADPHONE PC board ass'y	NAETC-8790-1T	1	1B126590-1T	<DD>
		NAETC-8790-1U	1	1B126590-1U	<PP>
U09	HOLDER PC board ass'y	NAETC-8795-1T	1	1B126595-1T	<DD>
		NAETC-8795-1U	1	1B126595-1U	<PP>
U10	HOLDER PC board ass'y	NAETC-8796-1T	1	1B126596-1T	<DD>
		NAETC-8796-1U	1	1B126596-1U	<PP>
U11	HOLDER PC board ass'y	NAETC-8797-1T	1	1B126597-1T	<DD>
		NAETC-8797-1U	1	1B126597-1U	<PP>
U12	DSP PC board ass'y	NADG-8816-1C	1	1D126516-1C	<DD>
		NADG-8816-1D	1	1D126516-1D	<PP>
U13	XM PC board ass'y	NADG-8817-1C	1	1D126517-1C	<DD>
U14	VIDEO PC board ass'y	NAVD-8819-1C	1	1D126519-1C	<DD>
		NAVD-8819-1D	1	1D126519-1D	<PP>
U15	AMPLIFIER PC board ass'y	NAAF-8911-1G	1	1H126511-1G	<DD>
		NAAF-8911-1H	1	1H126511-1H	<PP>
U16	SEC. TERMINAL-2 PC board ass'y	NAPS-8912-1G	1	1H126512-1G	<DD>
		NAPS-8912-1H	1	1H126512-1H	<PP>
U17	THERMAL SENSOR PC board ass'y	NAETC-8913-1G	1	1H126513-1G	<DD>
		NAETC-8913-1H	1	1H126513-1H	<PP>
U18	THERMAL SENSOR PC board ass'y	NAETC-8914-1G	1	1H126514-1G	<DD>
		NAETC-8914-1H	1	1H126514-1H	<PP>
U19	DRIVER AMPLIFIER PC board ass'y	NAAF-8917-1E	1	1F126517-1E	<DD>
		NAAF-8917-1F	1	1F126517-1F	<PP>
U21	HDMI PC board ass'y	NAVD-8928-1A	1	1B126528-1A	
U010	TUNER UNIT	ENG06507QFUS	1	240156	<DD>
U010 or	TUNER UNIT	FAE385-A11US	(1)	240152	<DD>
U010	TUNER UNIT	FAE485-E11EU	1	240154	<PP>

HT-R640

PC BOARD PARTS LIST

U01	DISPLAY PC BOARD (NADIS-8785-1T/1U)
U02	SWITCH PC BOARD (NADIS-8786-1T/1U)
U03	POWER SUPPLY PC BOARD (NAPS-8787-1T/1U)
U04	SEC. TERMINAL-1 PC BOARD (NAETC-8788-1T/1U)
U05	FRONT OPT PC BOARD (NAETC-8789-1T/1U)
U06	HEADPHONE PC BOARD (NAETC-8790-1T/1U)
U11	HOLDER PC BOARD (NAETC-8797-1T/1U)

CIRCUIT NO.	NAME	DESCRIPTION	Q'TY	PART NO(SN)	REMARKS
U7042	REMO SENS	NJL34H380A	1	241365	
U7351	PHT CP	TORX177L	1	24120127	
Q7002	FL TUBE	16-BT-128GNYK	1	212258A	
Q7002A	HOLDER	(FL)	1	27191222B	
Q7003	IC	M66005-0001AHP	1	22242208R3	
Q7004	TR	2SC2458-GR	1	2212115T	
Q7004 or	TR	2SC1740S-R	(1)	2213284T	
Q7004 or	TR	2SC1740S-S	(1)	2213285T	
Q7006	TR	KRA102M	1	2215770T	
Q7006 or	TR	DTA114ES	(1)	2213510T	
Q7151	TR	KRA102M	1	2215770T	<PP>
Q7151 or	TR	DTA114ES	(1)	2213510T	<PP>
D7001	LED	SDPB3DD0C	1	225464T	
D7002	ZENER D	DZ-8.2BSC	1	224850823T	
D7002 or	ZENER D	MTZJ8.2C	(1)	224470823T	
D7152	LED	SLI-343URC-TE7	1	225449T	
D7154	LED	SDPB3DD0C	1	225464T	<PP>
D911	DIODE	1SS133(DS)	1	223280T	
D911 or	DIODE	1SS133	(1)	223163T	
D912	DIODE	1SS133(DS)	1	223280T	
D912 or	DIODE	1SS133	(1)	223163T	
D921	DIODE	1SS133(DS)	1	223280T	
D921 or	DIODE	1SS133	(1)	223163T	
D922	DIODE	1SS133(DS)	1	223280T	
D922 or	DIODE	1SS133	(1)	223163T	
D923	DIODE	1SS133(DS)	1	223280T	
D923 or	DIODE	1SS133	(1)	223163T	
D924	DIODE	1SS133(DS)	1	223280T	

D924 or	DIODE	1SS133	(1)	223163T	
D925	DIODE	1SS133(DS)	1	223280T	
D925 or	DIODE	1SS133	(1)	223163T	
D930	DIODE	1SS133(DS)	1	223280T	
D930 or	DIODE	1SS133	(1)	223163T	
D931	DIODE	1SS133(DS)	1	223280T	
D931 or	DIODE	1SS133	(1)	223163T	
D933	DIODE	1SS133(DS)	1	223280T	
D933 or	DIODE	1SS133	(1)	223163T	
D934	ZENER D	DZ-5.1BSB	1	224850512T	
D934 or	ZENER D	MTZJ5.1B	(1)	224470512T	
D935	DIODE	1SS133(DS)	1	223280T	
D935 or	DIODE	1SS133	(1)	223163T	
L7031	CHOKE COIL	NCH-1452 022M	1	233454M022T	
L7031 or	CHOKE COIL	NCH-1561 022K	(1)	233526K022T	
L7032	CHOKE COIL	NCH-1452 022M	1	233454M022T	
L7032 or	CHOKE COIL	NCH-1561 022K	(1)	233526K022T	
L7201	CHOKE COIL	NCH-1452 022M	1	233454M022T	
L7201 or	CHOKE COIL	NCH-1561 022K	(1)	233526K022T	
L7202	CHOKE COIL	NCH-1452 022M	1	233454M022T	
L7202 or	CHOKE COIL	NCH-1561 022K	(1)	233526K022T	
L7203	CHOKE COIL	NCH-1452 022M	1	233454M022T	
L7203 or	CHOKE COIL	NCH-1561 022K	(1)	233526K022T	
L7351	CHOKE COIL	NCH-1452 022M	1	233454M022T	<DD>
L7351 or	CHOKE COIL	NCH-1561 022K	(1)	233526K022T	<DD>
T902	P TRANS	NPT-1520JQ	1	2301812	!,<DD>
T902	P TRANS	NPT-1519GQ	1	2301811	!,<PP>
C7001	CERA C	CK45F50V-223Z	1	335622230T	
C7002	MMT C	MMT50V-104J	1	375521044T	
C7003	CERA C	CC45SL50V-101J	1	345021014T	
C7004	CERA C	CC45SL50V-101J	1	345021014T	
C7005	CERA C	CC45SL50V-101J	1	345021014T	
C7007	CERA C	CC45SL50V-101J	1	345021014T	
C7008	ELECT C	CE04W6.3V-100M	1	355721019T	
C7009	MMT C	MMT50V-104J	1	375521044T	
C7010	CERA C	CK45F50V-223Z	1	335622230T	
C7011	CERA C	CK45F50V-223Z	1	335622230T	
C7012	CERA C	CK45F50V-223Z	1	335622230T	
C7013	ELECT C	CE04W50V-33M	1	355783309T	
C7014	CERA C	CK45F50V-223Z	1	335622230T	
C7015	ELECT C	CE04W16V-100M	1	355741019T	
C7021	CERA C	CK45F50V-103Z	1	335621030T	
C7022	CERA C	CK45F50V-103Z	1	335621030T	
C7045	ELECT C	CE04W6.3V-100M(S)	1	353721019T	
C7047	CERA C	CK45B50V-102K	1	335321025T	
C7201	TF C	ECQ-B50V-102J	1	374721024T	
C7203	TF C	ECQ-B50V-102J	1	374721024T	
C7204	TF C	ECQ-B50V-102J	1	374721024T	
C7301	TF C	ECQ-B50V-471J	1	374724714T	
C7302	TF C	ECQ-B50V-471J	1	374724714T	
C7303	MMT C	MMT50V-104J	1	375521044T	
C7304	MMT C	MMT50V-104J	1	375521044T	
C7351	CERA C	CK45F50V-223Z	1	335622230T	
C7352	VR C	CE04W16V-100M(VR)	1	394641017T	
C901	IS C	ECQU2A103MLC	1	3800039S	!
C901 or	IS C	LE103-C3.5	(1)	3800042S	!
C901 or	IS C	RE275V-103M	(1)	3500196S	!
C902	TF C	ECQ-V50V-104J	1	374721044T	
C911	TF C	ECQ-B50V-102J	1	374721024T	
C921	CERA C	CK45F50V-223Z	1	335622230T	
C922	VR C	CE04W25V-2200M(VR)	1	394652227S	<DD>
C922	VR C	CE04W16V-2200M(VR)	1	394642227S	<PP>
C930	VR C	CE04W35V-100M(VR)	1	394661017T	
C933	VR C	CE04W50V-4.7M(VR)	1	394680477T	
R7001	CARBON R	R16J-100K	1	417341044T	
R7002	CARBON R	R16J-3.3K	1	417343324T	
R7003	CARBON R	R16J-3.3K	1	417343324T	
R7004	CARBON R	R16J-220	1	417342214T	
R7005	CARBON R	R16J-220	1	417342214T	
R7006	CARBON R	R16J-27K	1	417342734T	
R7007	CARBON R	R16J-220	1	417342214T	
R7008	CARBON R	R16J-220	1	417342214T	
R7010	CARBON R	R16J-120	1	417341214T	
R7021	CARBON R	R16J-10K	1	417341034T	
R7022	CARBON R	R16J-10K	1	417341034T	
R7023	CARBON R	R16J-10K	1	417341034T	

R7024	CARBON R	R16J-10K	1	417341034T	
R7045	CARBON R	R16J-100	1	417341014T	
R7046	CARBON R	R16J-1K	1	417341024T	
R7101	CARBON R	R16J-330	1	417343314T	
R7102	CARBON R	R16J-470	1	417344714T	
R7103	CARBON R	R16J-560	1	417345614T	
R7104	CARBON R	R16J-820	1	417348214T	
R7105	CARBON R	R16J-1.2K	1	417341224T	
R7106	CARBON R	R16J-2.2K	1	417342224T	
R7107	CARBON R	R16J-330	1	417343314T	
R7108	CARBON R	R16J-470	1	417344714T	
R7109	CARBON R	R16J-560	1	417345614T	
R7110	CARBON R	R16J-820	1	417348214T	
R7111	CARBON R	R16J-1.2K	1	417341224T	
R7112	CARBON R	R16J-2.2K	1	417342224T	
R7113	CARBON R	R16J-3.9K	1	417343924T	
R7115	CARBON R	R16J-330	1	417343314T	
R7116	CARBON R	R16J-470	1	417344714T	
R7117	CARBON R	R16J-560	1	417345614T	
R7118	CARBON R	R16J-820	1	417348214T	
R7119	CARBON R	R16J-1.2K	1	417341224T	
R7120	CARBON R	R16J-2.2K	1	417342224T	
R7121	CARBON R	R16J-3.9K	1	417343924T	
R7122	CARBON R	R16J-12K	1	417341234T	
R7123	CARBON R	R16J-330	1	417343314T	
R7124	CARBON R	R16J-470	1	417344714T	
R7125	CARBON R	R16J-560	1	417345614T	
R7126	CARBON R	R16J-820	1	417348214T	
R7127	CARBON R	R16J-1.2K	1	417341224T	
R7128	CARBON R	R16J-2.2K	1	417342224T	
R7129	CARBON R	R16J-3.9K	1	417343924T	
R7130	CARBON R	R16J-12K	1	417341234T	
R7151	CARBON R	R16J-2.2K	1	417342224T	
R7152	CARBON R	R16J-120	1	417341214T	<PP>
R7301	CARBON R	R16J-330	1	417343314T	
R7302	CARBON R	R16J-330	1	417343314T	
R7303	CARBON R	R16J-75	1	417347504T	
R7304	CARBON R	R16J-75	1	417347504T	
R7305	CARBON R	R16J-75	1	417347504T	
R7351	CARBON R	R16J-220	1	417342214T	
R9102	METAL R	RNU1/2WCJ-8.2	1	453530824T	
R921	METAL O R	RS1/2WBJ-56	1	443525604T	
R934	CARBON R	R16J-100K	1	417341044T	
F901A	FUSE HOL	NSCT-1P2031	1	25052133T	!
F901B	FUSE HOL	NSCT-1P2031	1	25052133T	!
F901C	FUSE LABEL	10A/125V	1	29362241	<DD>
F901C	LABEL	T5A/250V	1	29360419	<PP>
F903A	FUSE HOL	NSCT-1P2031	1	25052133T	!
F903B	FUSE HOL	NSCT-1P2031	1	25052133T	!
F903C	LABEL	T2.5AL250V	1	29361747	<PP>
F910A	FUSE HOL	NSCT-1P2031	1	25052133T	!
F910B	FUSE HOL	NSCT-1P2031	1	25052133T	!
F910C	LABEL	5A/125V	2	29360462	
JL6605A	WIRE HOL	NSCT-5P896	1	25051109	
JL7101A	WIRE HOL	NSCT-8P899	1	25051112	
JL7101B	WIRE HOL	NSCT-8P899	1	25051112	
JL7351A	WIRE HOL	NSCT-3P894	1	25051107	
JL7351B	WIRE HOL	NSCT-3P894	1	25051107	
JL901A	WIRE HOL	NSCT-5P876	1	25051089	
JL9101A	WIRE HOL	NSCT-6P897	1	25051110	
P701B	SOCKET	NSCT-36P2166	1	25052269	
P7201	ST JACK	MSJ-064-05A SR	1	25045783	
P7201 or	ST JACK	YKB21-5005	(1)	25045724	
P7301	PIN JACK	NPI-7PDB477	1	25045680	
P901A	PLUG	NPLG-2P631	1	25055675	!
P901A or	PLUG	1-1123724-2	(1)	25056402	!
P902	AC OUTLET	AC-181-UL-11V	1	25053030	!,<DD>
P902	SOCKET	NSCT-2P1359	1	25051572	!,<PP>
P911	PLUG	NPLG-2P631	1	25055675	!
P911 or	PLUG	1-1123724-2	(1)	25056402	!
RL901	RELAY	NRL-1P10A-DC9-186	1	25065683	!,<DD>
RL901	RELAY	NRL-1P5A-DC9-179	1	25065669	!,<PP>
S7002	R ENCODE	EC12E2425	1	25065655	
S7102	PUSH SW	NPS-111-S681	1	25035718T	
S7108	PUSH SW	NPS-111-S681	1	25035718T	
S7110	PUSH SW	NPS-111-S681	1	25035718T	<PP>

S7116	PUSH SW	NPS-111-S681	1	25035718T	
S7118	PUSH SW	NPS-111-S681	1	25035718T	
S7120	PUSH SW	NPS-111-S681	1	25035718T	
S7122	PUSH SW	NPS-111-S681	1	25035718T	
S7124	PUSH SW	NPS-111-S681	1	25035718T	
S7126	PUSH SW	NPS-111-S681	1	25035718T	
S7128	PUSH SW	NPS-111-S681	1	25035718T	
S7130	PUSH SW	NPS-111-S681	1	25035718T	
S7132	PUSH SW	NPS-111-S681	1	25035718T	
S7134	PUSH SW	NPS-111-S681	1	25035718T	
S7136	PUSH SW	NPS-111-S681	1	25035718T	
S7138	PUSH SW	NPS-111-S681	1	25035718T	
S7140	PUSH SW	NPS-111-S681	1	25035718T	
S7142	PUSH SW	NPS-111-S681	1	25035718T	
S7144	PUSH SW	NPS-111-S681	1	25035718T	
S7146	PUSH SW	NPS-111-S681	1	25035718T	
S7148	PUSH SW	NPS-111-S681	1	25035718T	
S7150	PUSH SW	NPS-111-S681	1	25035718T	
S7152	PUSH SW	NPS-111-S681	1	25035718T	
S7154	PUSH SW	NPS-111-S681	1	25035718T	
S7156	PUSH SW	NPS-111-S681	1	25035718T	
S7158	PUSH SW	NPS-111-S681	1	25035718T	
S7160	PUSH SW	NPS-111-S681	1	25035718T	
S7162	PUSH SW	NPS-111-S681	1	25035718T	
S7164	PUSH SW	NPS-111-S681	1	25035718T	
S7166	PUSH SW	NPS-111-S681	1	25035718T	
E7201	TRM	NTM-1P233(M1969)	1	25060302	
E7301	RETAINER	(S)	1	27141931	
E7601	TRM(SCREW)	NEJITANSI M3	1	25065425	
E901	TRM(SCREW)	NEJITANSI M3	1	25065425	

HT-R640

PC BOARD PARTS LIST

U12	DSP PC BOARD (NADG-8816-1C/1D)
U13	XM PC BOARD (NADG-8817-1C)
U14	VIDEO PC BOARD (NAVD-8819-1C/1D)

CIRCUIT NO.	NAME	DESCRIPTION	Q'TY	PART NO(SN)	REMARKS
U131	PHT CP	GP1FAV51RK5	1	24120129	
U131 or	PHT CP	JSR1165-001recieving	(1)	24120143	
U132	PHT CP	GP1FAV51RK5	1	24120129	
U132 or	PHT CP	JSR1165-001recieving	(1)	24120143	
U133	PHT CP	GP1FAV51RK5	1	24120129	
U133 or	PHT CP	JSR1165-001recieving	(1)	24120143	
U134	PHT CP	GP1FAV51TKBF	1	24120132	
U134 or	PHT CP	JST1165-001transmitting	(1)	24120142	
Q131	IC	74HCU04F	1	222740046R2	
Q151	IC	TC74VHC541FT(EKJ)	1	22274541E1R2TO	
Q151 or	IC	SN74AHC541PWR	(1)	22274541I1R2TI	
Q151 or	IC	TC74VHC541FT	(1)	22274541ER2TO	
Q152	IC	TC74VHCT08AFT (EKJ)	1	22274008G1R2TO	
Q152 or	IC	TC74VHCT08AFT	(1)	22274008GR2TO	
Q153	IC	TC74VHCT08AFT (EKJ)	1	22274008G1R2TO	
Q153 or	IC	TC74VHCT08AFT	(1)	22274008GR2TO	
Q154	IC	TC74VHC541FT(EKJ)	1	22274541E1R2TO	
Q154 or	IC	SN74AHC541PWR	(1)	22274541I1R2TI	
Q154 or	IC	TC74VHC541FT	(1)	22274541ER2TO	
Q161	TR	KRC104S	1	2216210R2	
Q161 or	TR	RN1404	(1)	2214490R2	
Q162	TR	KRC104S	1	2216210R2	
Q162 or	TR	RN1404	(1)	2214490R2	
Q163	TR	KRA102S	1	2216220R2	
Q163 or	TR	RN2402	(1)	2214530R2	
Q164	TR	KRA102S	1	2216220R2	
Q164 or	TR	RN2402	(1)	2214530R2	
Q171	IC	TC7WU04FU(TE12L_F)	1	22240935R2	
Q181	IC	TC74VHC157FT	1	22274157ER2TO	
Q2001	IC	F2602E-01	1	22242266R2	<DD>
Q2002	IC	AK4384ET	1	22242280R2	<DD>
Q2003	IC	NE5532APSR	1	22242283R2	<DD>
Q2004	IC	TA48033AF(TE16L_NQ)	1	22278033DR2TO	<DD>
Q2004 or	IC	BA33BC0FP	(1)	22278033DR2RH	<DD>
Q2004 or	IC	NJM2391DL1-33	(1)	22278033DR2JR	<DD>
Q2005	IC	78L05(NJM78L05UA)	1	222780053R2JR	<DD>
Q2006	IC	TC74HCT7007AF(EL_F)	1	222740077R2TO	<DD>

Q2007	IC	TC74VHC541FT(EKJ)	1	22274541E1R2TO	<DD>
Q2007 or	IC	SN74AHC541PWR	(1)	22274541I1R2TI	<DD>
Q2007 or	IC	TC74VHC541FT	(1)	22274541E1R2TO	<DD>
Q201	IC	D707E001RFP250	1	22242309R3	
Q281	IC	RMS116T(LF)	1	22242340R3	
Q281 or	IC	IC42S16100	(1)	22242123R2	
Q281 or	IC	M12L16161A-7TG	(1)	22242278R3	
Q282	IC	ES29LV400ET-70TG	1	222W0065R3	
Q301	IC	CS42518-CQZR-D	1	22242229R2	
Q341	IC	NE5532APSR	1	22242283R2	
Q4001	IC	ADV7183B	1	22242202R3	
Q4002	IC	AN15881A-VT	1	22242318R3	
Q4003	IC	ADV7172	1	22242155R3	
Q4004	IC	LC74763-9836	1	22241779	
Q4006	IC	TA48018AF(TE16L_NQ)	1	22278018DR2TO	
Q4006 or	IC	BA18BC0FP	(1)	22278018DR2RH	
Q4007	IC	TA48033AF(TE16L_NQ)	1	22278033DR2TO	
Q4007 or	IC	BA33BC0FP	(1)	22278033DR2RH	
Q4008	TR	2SK3019	1	2216520R2	
Q4009	TR	2SK3019	1	2216520R2	
Q401	IC	NE5532APSR	1	22242283R2	
Q4010	TR	KRC101S	1	2216330R2	
Q4010 or	TR	RN1401(TE85L_F)	(1)	2214460R2	
Q4011	TR	KRA102S	1	2216220R2	
Q4011 or	TR	RN2402	(1)	2214530R2	
Q4011 or	TR	UNR2111	(1)	2217110R2	
Q4012	TR	KTA1504-GR	1	2216185R2	
Q4012 or	TR	2SA1162-GR	(1)	2214375R2	
Q4013	TR	KTA1504-GR	1	2216185R2	
Q4013 or	TR	2SA1162-GR	(1)	2214375R2	
Q4014	TR	KTA1504-GR	1	2216185R2	
Q4014 or	TR	2SA1162-GR	(1)	2214375R2	
Q4015	TR	RN1443	1	2215510R2	
Q4015 or	TR	KRC286S	(1)	2217250R2	
Q4016	TR	RN1443	1	2215510R2	
Q4016 or	TR	KRC286S	(1)	2217250R2	
Q4017	TR	KTC3875-GR	1	2216175R2	
Q4017 or	TR	2SC2712-GR	(1)	2213145R2	
Q4018	TR	KRC101S	1	2216330R2	
Q4018 or	TR	RN1401(TE85L_F)	(1)	2214460R2	
Q4019	TR	RN1443	1	2215510R2	
Q402	IC	NE5532APSR	1	22242283R2	
Q403	IC	NE5532APSR	1	22242283R2	
Q601	TR	KRC104S	1	2216210R2	
Q601 or	TR	RN1404	(1)	2214490R2	
Q602	TR	KRA102S	1	2216220R2	
Q602 or	TR	RN2402	(1)	2214530R2	
Q6601	TR	DTC123JKA	1	2216690R2	
Q6601 or	TR	KRC105S	(1)	2217290R2	
Q6601 or	TR	RN1405	(1)	2214500R2	
Q6602	TR	DTC123JKA	1	2216690R2	
Q6602 or	TR	KRC105S	(1)	2217290R2	
Q6602 or	TR	RN1405	(1)	2214500R2	
Q701	IC	M30627FHPGP U5C	1	222W0025R3	
Q702	IC	S-812C56AUA-C3K	1	22242207R2	
Q741	IC	SI8008TM	1	22242323R2	
Q742	IC	BD7820	1	22242300R2	
Q746	IC	TA48033AF(TE16L_NQ)	1	22278033DR2TO	
Q746 or	IC	BA33BC0FP	(1)	22278033DR2RH	
Q751	TR	KRC104S	1	2216210R2	
Q751 or	TR	RN1404	(1)	2214490R2	
Q752	TR	KRA102S	1	2216220R2	
Q752 or	TR	RN2402	(1)	2214530R2	
Q9001	TR	2SC2235-Y(TPE6_F)	1	2211654T	
Q9002	TR	DTC123JKA	1	2216690R2	
Q9002 or	TR	KRC105S	(1)	2217290R2	
Q9002 or	TR	RN1405	(1)	2214500R2	
Q9021	IC	SI8008TM	1	22242323R2	
Q9022	IC	BA00JC5WT-V5	1	222580002	
Q9022A	SCREW	3P+10FN(3BC)	1	82143010GR	
Q9031	IC	MPC2905HF	1	22278005DNE	
Q9031A	SCREW	3P+10FN(3BC)	1	82143010GR	
Q9031B	HEAT SINK	RAD-231	1	27160592	
D101	DIODE	RL1N4003	1	22380260T	
D101 or	DIODE	GP104003E	(1)	22380035T	
D102	DIODE	RL1N4003	1	22380260T	

D102 or	DIODE	GP104003E	(1)	22380035T	
D103	DIODE	RL1N4003	1	22380260T	
D103 or	DIODE	GP104003E	(1)	22380035T	
D104	C-DIODE	1SS352	1	223234R2	
D104 or	C-DIODE	1SS355	(1)	223269R2	
D104 or	C-DIODE	KDS4148U	(1)	223283R2	
D104 or	C-DIODE	MA2J111	(1)	223279R2	
D2001	ZENER D	UDZ55.1B	1	224550510R2	<DD>
D2001 or	ZENER D	MAZ8051-M	(1)	224750512R2	<DD>
D4001	C-DIODE	1SS352	1	223234R2	
D4001 or	C-DIODE	1SS355	(1)	223269R2	
D4001 or	C-DIODE	KDS4148U	(1)	223283R2	
D4001 or	C-DIODE	MA2J111	(1)	223279R2	
D4002	C-DIODE	1SS352	1	223234R2	
D4002 or	C-DIODE	1SS355	(1)	223269R2	
D4002 or	C-DIODE	KDS4148U	(1)	223283R2	
D4002 or	C-DIODE	MA2J111	(1)	223279R2	
D4142	C-DIODE	1SS352	1	223234R2	
D4142 or	C-DIODE	1SS355	(1)	223269R2	
D4142 or	C-DIODE	KDS4148U	(1)	223283R2	
D4142 or	C-DIODE	MA2J111	(1)	223279R2	
D601	C-DIODE	1SS352	1	223234R2	
D601 or	C-DIODE	1SS355	(1)	223269R2	
D601 or	C-DIODE	KDS4148U	(1)	223283R2	
D601 or	C-DIODE	MA2J111	(1)	223279R2	
D602	C-DIODE	1SS352	1	223234R2	
D602 or	C-DIODE	1SS355	(1)	223269R2	
D602 or	C-DIODE	KDS4148U	(1)	223283R2	
D602 or	C-DIODE	MA2J111	(1)	223279R2	
D603	ZENER D	UDZ55.1B	1	224550510R2	
D603 or	ZENER D	MAZ8051-M	(1)	224750512R2	
D604	C-DIODE	1SS352	1	223234R2	
D604 or	C-DIODE	1SS355	(1)	223269R2	
D604 or	C-DIODE	KDS4148U	(1)	223283R2	
D604 or	C-DIODE	MA2J111	(1)	223279R2	
D6600	C-DIODE	1SS352	1	223234R2	
D6600 or	C-DIODE	1SS355	(1)	223269R2	
D6600 or	C-DIODE	KDS4148U	(1)	223283R2	
D6600 or	C-DIODE	MA2J111	(1)	223279R2	
D6603	C-DIODE	1SS352	1	223234R2	
D6603 or	C-DIODE	1SS355	(1)	223269R2	
D6603 or	C-DIODE	KDS4148U	(1)	223283R2	
D6603 or	C-DIODE	MA2J111	(1)	223279R2	
D701	C-DIODE	1SS352	1	223234R2	
D701 or	C-DIODE	1SS355	(1)	223269R2	
D701 or	C-DIODE	KDS4148U	(1)	223283R2	
D701 or	C-DIODE	MA2J111	(1)	223279R2	
D702	C-DIODE	1SS352	1	223234R2	
D702 or	C-DIODE	1SS355	(1)	223269R2	
D702 or	C-DIODE	KDS4148U	(1)	223283R2	
D702 or	C-DIODE	MA2J111	(1)	223279R2	
D703	C-DIODE	1SS352	1	223234R2	
D703 or	C-DIODE	1SS355	(1)	223269R2	
D703 or	C-DIODE	KDS4148U	(1)	223283R2	
D703 or	C-DIODE	MA2J111	(1)	223279R2	
D705	C-DIODE	1SS352	1	223234R2	
D705 or	C-DIODE	1SS355	(1)	223269R2	
D705 or	C-DIODE	KDS4148U	(1)	223283R2	
D705 or	C-DIODE	MA2J111	(1)	223279R2	
D741	C-DIODE	CRS09(TE85L_Q)	1	223274R2	
D742	C-DIODE	1SS352	1	223234R2	
D742 or	C-DIODE	1SS355	(1)	223269R2	
D742 or	C-DIODE	KDS4148U	(1)	223283R2	
D742 or	C-DIODE	MA2J111	(1)	223279R2	
D743	C-DIODE	1SS352	1	223234R2	
D743 or	C-DIODE	1SS355	(1)	223269R2	
D743 or	C-DIODE	KDS4148U	(1)	223283R2	
D743 or	C-DIODE	MA2J111	(1)	223279R2	
D744	DIODE	RL1N4003	1	22380260T	
D744 or	DIODE	GP104003E	(1)	22380035T	
D9002	DIODE	RL1N4003	1	22380260T	
D9002 or	DIODE	GP104003E	(1)	22380035T	
D9005	ZENER D	UDZS36B	1	224553600R2	
D9011	DIODE	D5SBA20	1	22380130F	
D9012	C-DIODE	1SS352	1	223234R2	
D9012 or	C-DIODE	1SS355	(1)	223269R2	

D9012 or	C-DIODE	KDS4148U	(1)	223283R2	
D9012 or	C-DIODE	MA2J111	(1)	223279R2	
D9013	C-DIODE	1SS352	1	223234R2	
D9013 or	C-DIODE	1SS355	(1)	223269R2	
D9013 or	C-DIODE	KDS4148U	(1)	223283R2	
D9013 or	C-DIODE	MA2J111	(1)	223279R2	
D9014	C-DIODE	1SS352	1	223234R2	
D9014 or	C-DIODE	1SS355	(1)	223269R2	
D9014 or	C-DIODE	KDS4148U	(1)	223283R2	
D9014 or	C-DIODE	MA2J111	(1)	223279R2	
D9015	C-DIODE	1SS352	1	223234R2	
D9015 or	C-DIODE	1SS355	(1)	223269R2	
D9015 or	C-DIODE	KDS4148U	(1)	223283R2	
D9015 or	C-DIODE	MA2J111	(1)	223279R2	
D9017	C-DIODE	1SS352	1	223234R2	
D9017 or	C-DIODE	1SS355	(1)	223269R2	
D9017 or	C-DIODE	KDS4148U	(1)	223283R2	
D9017 or	C-DIODE	MA2J111	(1)	223279R2	
D9020	C-DIODE	1SS352	1	223234R2	
D9020 or	C-DIODE	1SS355	(1)	223269R2	
D9020 or	C-DIODE	KDS4148U	(1)	223283R2	
D9020 or	C-DIODE	MA2J111	(1)	223279R2	
D9021	C-DIODE	CRS09(TE85L_Q)	1	223274R2	
D9022	DIODE	RL1N4003	1	22380260T	
D9022 or	DIODE	GP104003E	(1)	22380035T	
D9024	ZENER D	UDZS5.6B	1	224550560R2	
D9024 or	ZENER D	MAZ8056-M	(1)	224750562R2	
L131	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	
L132	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	
L133	CHOKE COIL	LBC2518T4R7M	1	231364M047R2	
L134	CHOKE COIL	LBC2518T470M	1	231364M470R2	
L151	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L152	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L153	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L171	CHOKE COIL	LBC2518T470M	1	231364M470R2	
L172	EMIFIL	BK1608LM182-T	1	230958R1	
L173	EMIFIL	BK1608LM182-T	1	230958R1	
L181	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L182	EMIFIL	BK1608LM182-T	1	230958R1	
L2001	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	<DD>
L2002	EMIFIL	BK1608LM182-T	1	230958R1	<DD>
L2003	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	<DD>
L2004	CHOKE COIL	BLM21PG221SN1	1	230949R2	<DD>
L2005	CHOKE COIL	BLM21PG221SN1	1	230949R2	<DD>
L201	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L202	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L203	EMIFIL	BK1608LL241-T	1	230959R1	
L241	EMIFIL	ACF451832-333-T	1	230978R2	
L281	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L282	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L301	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	
L302	CHOKE COIL	LBC2518T4R7M	1	231364M047R2	
L303	CHOKE COIL	LBC2518T4R7M	1	231364M047R2	
L304	CHOKE COIL	LBC2518T4R7M	1	231364M047R2	
L312	EMIFIL	BK1608LM182-T	1	230958R1	
L313	EMIFIL	BK1608LM182-T	1	230958R1	
L4001	C-CARBON R	RN72K2E-022JE	1	435220224R1	
L4002	CHOKE COIL	LBC2518T220M	1	231364M220R2	
L4003	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	
L4004	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	
L4005	CHOKE COIL	LBC2518T220M	1	231364M220R2	
L4006	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	
L4007	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	
L4008	CHOKE COIL	LBC2518T2R2M	1	231364M022R2	
L4009	CHOKE COIL	NCH-1572	1	231292J056R2	
L4010	C-CARBON R	RN72K2E-220JE	1	435222204R1	
L4011	C-CARBON R	RN72K2E-022JE	1	435220224R1	
L4015	CHOKE COIL	LBC2518T4R7M	1	231364M047R2	
L6600	S COIL	S-1.3C	1	231176S	<PP>
L6601	S COIL	S-1.3C	1	231176S	<PP>
L6602	S COIL	S-1.3C	1	231176S	<PP>
L6603	S COIL	S-1.3C	1	231176S	<PP>
L6604	S COIL	S-1.3C	1	231176S	<PP>
L741	CHOKE COIL	NCH-2541	1	231363K470	
L9001	CHOKE COIL	NCH-2541	1	231363K470	
X171	CRYSTAL	HC-49US24.576MHz	1	3010423T	

X2001	CRYSTAL	DSX840GA 45.1584MHz	1	3010420R2	<DD>
X2001 or	CRYSTAL	FCX-02N 45.1584MHz	(1)	3010421R2	<DD>
X4001	CRYSTAL	HC-49/U0314.318M	1	3010363T	
X4001 or	CRYSTAL	9SM1431818D11F5EZA00	(1)	3010434T	
X4002	CRYSTAL	HC-49/U0317.734M	1	3010364T	<PP>
X4003	CRYSTAL	FCX-03-28.6363MHz	1	3010408R2	
X701	CERA LOCK	CSTCR6M0055-R0	1	3010397R2	
C102	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C103	VX C	CE04W25V-100M(VX_BLK)	1	397351017T	
C131	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C132	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C133	C-CERA C	CK725B1C-104K1	1	332121045R1	
C134	C-CERA C	CK725B1C-104K1	1	332121045R1	
C135	C-CERA C	CC725CH1H-080D1	1	342100802R1	
C136	C-CERA C	CC725CH1H-080D1	1	342100802R1	
C137	C-CERA C	CK725B1C-104K1	1	332121045R1	
C138	C-CERA C	CC725CH1H-080D1	1	342100802R1	
C139	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C140	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C141	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C142	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C143	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C144	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C145	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C146	C-CERA C	CK725B1H-103K1	1	332101035R1	
C147	C-CERA C	CK725B1H-103K1	1	332101035R1	
C151	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C152	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C153	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C154	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C171	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C172	C-CERA C	CC725CH1H-060D1	1	342100602R1	
C173	C-CERA C	CC725CH1H-060D1	1	342100602R1	
C181	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C2001	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2002	C-CERA C	CK725B1H-102K1	1	332101025R1	<DD>
C2003	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2004	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2005	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2006	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2007	VR C	CE04W16V-100M(VR)	1	394641017T	<DD>
C2008	C-CERA C	CC725CH1H-040C1	1	342100401R1	<DD>
C2009	C-CERA C	CC725CH1H-080D1	1	342100802R1	<DD>
C201	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C2010	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2011	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2012	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2013	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2014	C-CERA C	CK725B1H-102K1	1	332101025R1	<DD>
C2015	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2016	VX C	CE04W50V-10M(VX)	1	393381007T	<DD>
C2017	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2018	VR C	CE04W6.3V-470M(VR)	1	394624717T	<DD>
C202	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C2021	VX C	CE04W50V-10M(VX)	1	393381007T	<DD>
C2022	VX C	CE04W50V-10M(VX)	1	393381007T	<DD>
C2023	C-CERA C	CC725CH1H-821J1	1	342108214R1	<DD>
C2024	C-CERA C	CC725CH1H-821J1	1	342108214R1	<DD>
C2025	C-CERA C	CC725CH1H-821J1	1	342108214R1	<DD>
C2026	C-CERA C	CC725CH1H-821J1	1	342108214R1	<DD>
C2027	VX C	CE04W50V-10M(VX)	1	393381007T	<DD>
C2028	VX C	CE04W50V-10M(VX)	1	393381007T	<DD>
C2029	VR C	CE04W16V-220M(VR)	1	394642217T	<DD>
C203	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C2030	VR C	CE04W16V-220M(VR)	1	394642217T	<DD>
C2031	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2032	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2033	VR C	CE04W6.3V-470M(VR)	1	394624717T	<DD>
C2034	VR C	CE04W16V-100M(VR)	1	394641017T	<DD>
C2035	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2036	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C204	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C2042	C-CERA C	CK725F1E-104Z1	1	332161040R1	<DD>
C2043	VR C	CE04W16V-100M(VR)	1	394641017T	<DD>
C2044	C-CERA C	CK725B1H-102K1	1	332101025R1	<DD>
C205	C-CERA C	CK725F1E-104Z1	1	332161040R1	

C206	C-CERA C	CK725F1E-104Z1	1	332161040R1
C207	C-CERA C	CK725F1E-104Z1	1	332161040R1
C208	C-CERA C	CK725F1E-104Z1	1	332161040R1
C209	C-CERA C	CK725F1E-104Z1	1	332161040R1
C210	C-CERA C	CK725F1E-104Z1	1	332161040R1
C213	C-CERA C	CK725F1E-104Z1	1	332161040R1
C214	C-CERA C	CK725F1E-104Z1	1	332161040R1
C215	C-CERA C	CK725F1E-104Z1	1	332161040R1
C221	C-CERA C	CK725F1E-104Z1	1	332161040R1
C222	C-CERA C	CK725F1E-104Z1	1	332161040R1
C223	C-CERA C	CK725F1E-104Z1	1	332161040R1
C224	C-CERA C	CK725F1E-104Z1	1	332161040R1
C225	C-CERA C	CK725F1E-104Z1	1	332161040R1
C226	C-CERA C	CK725F1E-104Z1	1	332161040R1
C227	C-CERA C	CK725F1E-104Z1	1	332161040R1
C228	C-CERA C	CK725F1E-104Z1	1	332161040R1
C229	C-CERA C	CK725F1E-104Z1	1	332161040R1
C230	C-CERA C	CK725F1E-104Z1	1	332161040R1
C231	C-CERA C	CK725F1E-104Z1	1	332161040R1
C232	C-CERA C	CK725F1E-104Z1	1	332161040R1
C241	VR C	CE04W6.3V-470M(VR)	1	394624717T
C242	C-CERA C	CK725F1E-104Z1	1	332161040R1
C245	C-CERA C	CC725CH1H-101J1	1	342101014R1
C271	VR C	CE04W6.3V-470M(VR)	1	394624717T
C272	VR C	CE04W6.3V-470M(VR)	1	394624717T
C281	VR C	CE04W6.3V-220M(VR)	1	394622217T
C282	C-CERA C	CK725F1E-104Z1	1	332161040R1
C283	VR C	CE04W6.3V-220M(VR)	1	394622217T
C284	C-CERA C	CK725F1E-104Z1	1	332161040R1
C285	C-CERA C	CK725F1E-104Z1	1	332161040R1
C286	C-CERA C	CK725F1E-104Z1	1	332161040R1
C301	VR C	CE04W6.3V-470M(VR)	1	394624717T
C302	VR C	CE04W6.3V-470M(VR)	1	394624717T
C303	VX C	CE04W6.3V-470M(VX_BLK)	1	397324717T
C304	VX C	CE04W6.3V-470M(VX_BLK)	1	397324717T
C305	C-CERA C	CK725F1E-104Z1	1	332161040R1
C306	VX C	CE04W50V 47M(VX_BLK)	1	397384707T
C307	C-CERA C	CK725F1E-104Z1	1	332161040R1
C308	VR C	CE04W16V-100M(VR)	1	394641017T
C309	C-CERA C	CK725F1E-104Z1	1	332161040R1
C310	C-CERA C	CK725B1H-222K1	1	332102225R1
C311	C-CERA C	CK725B1H-473K1	1	332104735R1
C312	C-CERA C	CK725F1E-104Z1	1	332161040R1
C313	C-CERA C	CK725F1E-104Z1	1	332161040R1
C314	C-CERA C	CK725F1E-104Z1	1	332161040R1
C315	C-CERA C	CK725F1E-104Z1	1	332161040R1
C316	C-CERA C	CC725CH1H-221J1	1	342102214R1
C318	C-CERA C	CK725F1E-104Z1	1	332161040R1
C320	C-CERA C	CK725F1E-104Z1	1	332161040R1
C321	VX C	CE04W50V-10M(VX)	1	393381007T
C322	VX C	CE04W50V-10M(VX)	1	393381007T
C323	VX C	CE04W50V-10M(VX)	1	393381007T
C324	VX C	CE04W50V-10M(VX)	1	393381007T
C325	C-CERA C	CC732CH1H-222J	1	347342224R2
C326	C-CERA C	CC732CH1H-222J	1	347342224R2
C331	C-CERA C	CC725CH1H-330J1	1	342103304R1
C332	C-CERA C	CC725CH1H-330J1	1	342103304R1
C333	C-CERA C	CC725CH1H-330J1	1	342103304R1
C334	C-CERA C	CC725CH1H-330J1	1	342103304R1
C335	C-CERA C	CC725CH1H-330J1	1	342103304R1
C336	C-CERA C	CC725CH1H-330J1	1	342103304R1
C337	C-CERA C	CC725CH1H-330J1	1	342103304R1
C341	C-CERA C	CC725CH1H-101J1	1	342101014R1
C342	C-CERA C	CC725CH1H-101J1	1	342101014R1
C4001	VR C	CE04W50V-10M(VR)	1	394681007T
C4002	VR C	CE04W50V-10M(VR)	1	394681007T
C4003	VR C	CE04W50V-10M(VR)	1	394681007T
C4004	VR C	CE04W50V-10M(VR)	1	394681007T
C4005	VR C	CE04W50V-10M(VR)	1	394681007T
C4006	VR C	CE04W50V-10M(VR)	1	394681007T
C4007	VR C	CE04W50V-10M(VR)	1	394681007T
C4008	VR C	CE04W50V-10M(VR)	1	394681007T
C4009	VR C	CE04W50V-10M(VR)	1	394681007T
C401	TF C	ECQ-B50V-222J	1	374722224T
C4010	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4011	VR C	CE04W50V-10M(VR)	1	394681007T

C4012	VR C	CE04W50V-10M(VR)	1	394681007T
C4013	C-CERA C	CK725B1H-102K1	1	332101025R1
C4014	C-CERA C	CK725B1H-102K1	1	332101025R1
C4015	C-CERA C	CK725B1H-102K1	1	332101025R1
C4016	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4017	VR C	CE04W50V-10M(VR)	1	394681007T
C4018	VR C	CE04W50V-10M(VR)	1	394681007T
C4019	C-CERA C	CK725B1H-102K1	1	332101025R1
C402	TF C	ECQ-B50V-222J	1	374722224T
C4020	C-CERA C	CK725B1H-102K1	1	332101025R1
C4021	C-CERA C	CK725B1H-102K1	1	332101025R1
C4022	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4023	VR C	CE04W50V-10M(VR)	1	394681007T
C4024	VR C	CE04W50V-10M(VR)	1	394681007T
C4025	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4026	VR C	CE04W50V-10M(VR)	1	394681007T
C4027	VR C	CE04W50V-10M(VR)	1	394681007T
C4028	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4029	VR C	CE04W6.3V-470M(VR)	1	394624717T
C403	TF C	ECQ-B50V-222J	1	374722224T
C4030	C-CERA C	CK725B1H-103K1	1	332101035R1
C4031	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4032	C-FILM C	ECHU16V-103J	1	373041034R2
C4033	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4034	C-FILM C	ECHU16V-823J	1	373048234R2
C4035	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4036	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4037	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4038	C-CERA C	CK725B1H-103K1	1	332101035R1
C4039	C-CERA C	CC725CH1H-080D1	1	342100802R1
C404	TF C	ECQ-V50V-333J	1	374723334T
C4040	C-CERA C	CC725CH1H-080D1	1	342100802R1
C4041	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4042	VR C	CE04W6.3V-470M(VR)	1	394624717T
C4043	C-CERA C	CK725B1H-103K1	1	332101035R1
C4044	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4045	CHIP TANTAL	TCSCS1C106MAAR	1	396541007R2
C4045 or	CHIP TANTAL	F93-16V-10M	(1)	395541007R2
C4045 or	CHIP TANTAL	TCFGA-1C106M8R	(1)	396041007R2
C4046	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4047	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4048	C-CERA C	CC725CH1H-102J1	1	342101024R1
C4049	C-CERA C	CK725F1E-104Z1	1	332161040R1
C405	TF C	ECQ-B50V-222J	1	374722224T
C4050	CHIP TANTAL	TCSCS1C106MAAR	1	396541007R2
C4050 or	CHIP TANTAL	F93-16V-10M	(1)	395541007R2
C4050 or	CHIP TANTAL	TCFGA-1C106M8R	(1)	396041007R2
C4051	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4052	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4053	CHIP TANTAL	TCSCS1C106MAAR	1	396541007R2
C4053 or	CHIP TANTAL	F93-16V-10M	(1)	395541007R2
C4053 or	CHIP TANTAL	TCFGA-1C106M8R	(1)	396041007R2
C4054	CHIP TANTAL	TCSCS1C106MAAR	1	396541007R2
C4054 or	CHIP TANTAL	F93-16V-10M	(1)	395541007R2
C4054 or	CHIP TANTAL	TCFGA-1C106M8R	(1)	396041007R2
C4055	C-CERA C	CK725B1H-102K1	1	332101025R1
C4056	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4057	CHIP TANTAL	TCSCS1C106MAAR	1	396541007R2
C4057 or	CHIP TANTAL	F93-16V-10M	(1)	395541007R2
C4057 or	CHIP TANTAL	TCFGA-1C106M8R	(1)	396041007R2
C4058	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4059	C-CERA C	CK725F1E-104Z1	1	332161040R1
C406	TF C	ECQ-B50V-222J	1	374722224T
C4060	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4061	C-CERA C	CK725B1H-103K1	1	332101035R1
C4062	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4063	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4064	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4065	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4066	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4067	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4068	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4069	C-CERA C	CK725F1E-104Z1	1	332161040R1
C4070	CHIP TANTAL	TCSCS1C106MAAR	1	396541007R2
C4070 or	CHIP TANTAL	F93-16V-10M	(1)	395541007R2
C4070 or	CHIP TANTAL	TCFGA-1C106M8R	(1)	396041007R2

C4071	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4072	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4073	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4074	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4075	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4076	C-CERA C	CK725B1A-105K1	1	332131055R1	
C4077	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4078	C-CERA C	CK725B1A-105K1	1	332131055R1	
C4079	C-CERA C	CC725CH1H-100D1	1	342101002R1	
C4080	C-CERA C	CC725CH1H-180J1	1	342101804R1	
C4081	C-CERA C	CC725CH1H-180J1	1	342101804R1	<PP>
C4082	C-CERA C	CC725CH1H-080D1	1	342100802R1	<PP>
C4083	C-CERA C	CC725CH1H-470J1	1	342104704R1	
C4084	C-CERA C	CC725CH1H-470J1	1	342104704R1	
C4085	C-CERA C	CC725CH1H-470J1	1	342104704R1	
C4086	VR C	CE04W50V-1M(VR)	1	394680107T	
C4087	TF C	ECQ-V50V-474J	1	374724744T	
C4088	C-CERA C	CC725CH1H-270J1	1	342102704R1	
C4089	C-CERA C	CC725CH1H-220J1	1	342102204R1	
C4090	TF C	ECQ-B50V-223J	1	374722234T	
C4091	VR C	CE04W50V-1M(VR)	1	394680107T	
C4092	TF C	ECQ-B50V-682J	1	374726824T	
C4093	VR C	CE04W50V-0.33M(VR)	1	394683397T	
C4094	C-CERA C	CK725B1H-122K1	1	332101225R1	
C4095	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4096	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C4097	C-CERA C	CC725CH1H-470J1	1	342104704R1	
C4098	VR C	CE04W16V-100M(VR)	1	394641017T	
C4099	VR C	CE04W16V-100M(VR)	1	394641017T	
C4100	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4101	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4102	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4103	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C4104	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C4105	VR C	CE04W50V-22M(VR)	1	394682207T	
C4106	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C4107	VR C	CE04W50V-22M(VR)	1	394682207T	
C4108	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C4109	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C411	TF C	ECQ-V50V-331J	1	374723314T	
C4110	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4111	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4112	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4114	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C4116	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C4118	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C4119	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C412	TF C	ECQ-V50V-331J	1	374723314T	
C4121	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C4122	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4123	VR C	CE04W25V-47M(VR)	1	394654707T	
C4124	VR C	CE04W25V-47M(VR)	1	394654707T	
C4125	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4127	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C4129	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C413	TF C	ECQ-V50V-331J	1	374723314T	
C4130	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C4131	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4132	VR C	CE04W50V-10M(VR)	1	394681007T	
C4133	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C4134	VR C	CE04W6.3V-220M(VR)	1	394622217T	
C4135	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4136	VR C	CE04W50V-22M(VR)	1	394682207T	
C4137	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4138	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4139	VR C	CE04W50V-10M(VR)	1	394681007T	
C414	TF C	ECQ-V50V-273J	1	374722734T	
C4140	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4141	VR C	CE04W25V-47M(VR)	1	394654707T	
C4142	C-CERA C	CC725CH1H-181J1	1	342101814R1	
C4143	C-CERA C	CC725CH1H-181J1	1	342101814R1	
C4144	C-CERA C	CC725CH1H-181J1	1	342101814R1	
C4147	VR C	CE04W50V-0.47M(VR)	1	394684797T	
C415	C-CERA C	CC725CH1H-331J1	1	342103314R1	
C4150	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4151	VR C	CE04W50V-10M(VR)	1	394681007T	

C4152	VR C	CE04W50V-10M(VR)	1	394681007T	
C4153	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4154	C-CERA C	CC725CH1H-221J1	1	342102214R1	
C4155	C-CERA C	CC725CH1H-221J1	1	342102214R1	
C4156	C-CERA C	CK725B1H-102K1	1	332101025R1	
C4157	C-CERA C	CK725B1H-102K1	1	332101025R1	
C4158	C-CERA C	CC725CH1H-470J1	1	342104704R1	
C4159	C-CERA C	CC725CH1H-470J1	1	342104704R1	
C416	C-CERA C	CC725CH1H-331J1	1	342103314R1	
C4160	C-CERA C	CC725CH1H-470J1	1	342104704R1	
C4161	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4162	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4163	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4165	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4170	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4171	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4172	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4173	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4174	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4175	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C4176	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4177	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4178	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C421	TF C	ECQ-V50V-331J	1	374723314T	
C4217	C-CERA C	CC725CH1H-181J1	1	342101814R1	
C4218	C-CERA C	CC725CH1H-181J1	1	342101814R1	
C4219	C-CERA C	CC725CH1H-181J1	1	342101814R1	
C422	TF C	ECQ-V50V-331J	1	374723314T	
C423	TF C	ECQ-V50V-331J	1	374723314T	
C424	TF C	ECQ-V50V-273J	1	374722734T	
C4242	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4243	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C4244	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C425	C-CERA C	CC725CH1H-331J1	1	342103314R1	
C426	C-CERA C	CC725CH1H-331J1	1	342103314R1	
C591	VX C	CE04W25V-220M(VX)	1	393352217T	
C592	VX C	CE04W25V-220M(VX)	1	393352217T	
C601	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C602	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C603	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C604	VR C	CE04W50V-4.7M(VR)	1	394680477T	
C605	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C606	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C607	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C608	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C609	C-CERA C	CC725CH1H-101J1	1	342101014R1	
C610	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C611	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C612	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C613	C-CERA C	CK725F1E-104Z1	1	332161040R1	
C614	C-CERA C	CK725B1H-102K1	1	332101025R1	
C616	C-CERA C	CK725B1H-102K1	1	332101025R1	
C617	C-CERA C	CK725B1H-102K1	1	332101025R1	
C618	C-CERA C	CK725B1H-102K1	1	332101025R1	
C619	C-CERA C	CK725B1H-102K1	1	332101025R1	
C620	C-CERA C	CK725B1H-102K1	1	332101025R1	
C621	C-CERA C	CK725B1H-102K1	1	332101025R1	
C6600	TF C	ECQ-B50V-223K	1	374722235T	
C6602	TF C	ECQ-B50V-223K	1	374722235T	
C6603	TF C	ECQ-B50V-223K	1	374722235T	
C6640	TF C	ECQ-B50V-103J	1	374721034T	<PP>
C6641	TF C	ECQ-B50V-103J	1	374721034T	<PP>
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C702	VR C	CE04W16V-100M(VR)	1	394641017T	
C704	EDL C	DX-5R5L224	1	3000079	
C705	VR C	CE04W16V-100M(VR)	1	394641017T	
C706	VR C	CE04W16V-470M(VR)	1	394644717T	
C741	VR C	CE04W16V-470M(VR)	1	394644717T	
C742	C-CERA C	CK725B1C-104K1	1	332121045R1	

C743	VR C	CE04W6.3V-1000M(VR)	1	394621027T	
C745	VX C	CE04W50V-10M(VX)	1	393381007T	
C746	VR C	CE04W16V-100M(VR)	1	394641017T	
C747	VX C	CE04W50V-10M(VX)	1	393381007T	
C748	VR C	CE04W16V-100M(VR)	1	394641017T	
C751	VR C	CE04W50V-1M(VR)	1	394680107T	
C752	C-CERA C	CK732B1A-105K	1	337361055R2	
C753	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C9001	VR C	CE04W63V-470M(VR)	1	394674717S	
C9005	VR C	CE04W50V-47M(VR)	1	394684707T	
C9006	C-CERA C	CK725F1H-223Z1	1	332152230R1	
C9011	VR C	CE04W16V-10000M(VR)	1	394641037S	
C9012	TF C	ECQ-V50V-334J	1	374723344T	
C9013	VR C	CE04W50V-3.3M(VR)	1	394680337T	
C9021	VR C	CE04W16V-470M(VR)	1	394644717T	
C9022	C-CERA C	CK725F1H-223Z1	1	332152230R1	
C9023	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C9024	C-CERA C	CK725F1H-223Z1	1	332152230R1	
C9025	VR C	CE04W6.3V-470M(VR)	1	394624717T	
C9031	VR C	CE04W16V-470M(VR)	1	394644717T	
C9032	VR C	CE04W6.3V-470M(VR)	1	394624717T	
R101	C-CARBON R	RN72K1J-000JE	1	435030004R1	<DD>
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R103	METAL R	RNU1/2WCJ-4.7	1	453530474T	<PP>
R104	C-CARBON R	RN72K1J-000JE	1	435030004R1	<PP>
R105	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R106	C-CARBON R	RN72K1J-000JE	1	435030004R1	<DD>
R107	C-CARBON R	RN72K1J-000JE	1	435030004R1	<DD>
R131	C-CARBON R	RN72K1J-750JE	1	435037504R1	
R132	C-CARBON R	RN72K1J-750JE	1	435037504R1	
R133	C-CARBON R	RN72K1J-100JE	1	435031004R1	
R134	C-CARBON R	RN72K1J-100JE	1	435031004R1	
R135	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R136	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R137	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R138	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R139	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R140	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R141	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R142	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R143	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R144	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R151	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R152	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R153	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R161	C-CARBON R	RN72K1J-104JE	1	435031044R1	
R162	C-CARBON R	RN72K1J-104JE	1	435031044R1	
R163	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R164	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R171	C-CARBON R	RN72K1J-105JE	1	435031054R1	
R172	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R173	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R181	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R182	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R183	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R184	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R185	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R186	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R188	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R189	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R190	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R191	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R193	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R200	C-CARBON R	RN72K1J-331JE	1	435033314R1	
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R2014	C-CARBON R	RN72K1J-331JE	1	435033314R1	<DD>
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R202	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R2021	C-CARBON R	RN72K1J-222JE	1	435032224R1	<DD>
R2022	C-CARBON R	RN72K1J-222JE	1	435032224R1	<DD>
R2023	C-CARBON R	RN72K1J-104JE	1	435031044R1	<DD>
R2024	C-CARBON R	RN72K1J-104JE	1	435031044R1	<DD>
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R221	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R250	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R251	C-CARBON R	RN72K1J-331JE	1	435033314R1	
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R253	C-CARBON R	RN72K1J-470JE	1	435034704R1	
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R259	C-CARBON R	RN72K1J-331JE	1	435033314R1	
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R668	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R669	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R6690	METAL O R	RS1/2WBJ-10	1	443521004T	
R6691	METAL O R	RS1/2WBJ-390	1	443523914T	
R670	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R671	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R672	C-CARBON R	RN72K1J-105JE	1	435031054R1	
R673	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R674	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R675	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R676	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R677	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R678	C-CARBON R	RN72K1J-333JE	1	435033334R1	<PP>
R679	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R681	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R682	C-CARBON R	RN72K1J-333JE	1	435033334R1	
R683	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R684	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R685	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R686	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R687	C-CARBON R	RN72K1J-473JE	1	435034734R1	
R688	C-CARBON R	RN72K1J-103JE	1	435031034R1	

R690	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R691	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R692	C-CARBON R	RN72K1J-273JE	1	435032734R1	
R693	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R694	C-CARBON R	RN72K1J-273JE	1	435032734R1	
R695	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R696	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R697	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R698	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R699	C-CARBON R	RN72K1J-000JE	1	435030004R1	
R6992	METAL O R	RS1/2WBJ-390	1	443523914T	
R701	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R702	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R703	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R704	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R705	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R707	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R708	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R709	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R710	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R711	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R712	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R713	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R714	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R715	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R716	C-CARBON R	RN72K1J-472JE	1	435034724R1	
R717	C-CARBON R	RN72K1J-472JE	1	435034724R1	
R718	C-CARBON R	RN72K1J-472JE	1	435034724R1	
R719	C-CARBON R	RN72K1J-272JE	1	435032724R1	
R720	C-CARBON R	RN72K1J-472JE	1	435034724R1	
R721	C-CARBON R	RN72K1J-272JE	1	435032724R1	
R722	C-CARBON R	RN72K1J-472JE	1	435034724R1	
R723	C-CARBON R	RN72K1J-272JE	1	435032724R1	
R724	C-CARBON R	RN72K1J-472JE	1	435034724R1	
R725	C-CARBON R	RN72K1J-272JE	1	435032724R1	
R726	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R727	C-CARBON R	RN72K1J-221JE	1	435032214R1	
R728	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R731	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R732	C-CARBON R	RN72K1J-470JE	1	435034704R1	
R741	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R742	C-CARBON R	RN72K1J-682JE	1	435036824R1	
R743	C-CARBON R	RN72K1J-682JE	1	435036824R1	
R744	C-CARBON R	RN72K1J-000JE	1	435030004R1	
R745	C-CARBON R	RN72K1J-393JE	1	435033934R1	
R746	C-CARBON R	RN72K1J-393JE	1	435033934R1	
R747	C-CARBON R	RN72K1J-333JE	1	435033334R1	
R748	METAL R	RNU1/2WCJ-2.2	1	453530224T	
R749	C-CARBON R	RN72K1J-392JE	1	435033924R1	
R751	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R752	C-CARBON R	RN72K1J-222JE	1	435032224R1	
R753	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R761	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R771	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R9001	METAL R	RNU2WCJ-3.3	1	452730334F	
R9002	METAL R	RNU2WCJ-3.3	1	452730334F	
R9003	C-CARBON R	RN72K1J-822JE	1	435038224R1	
R9004	C-CARBON R	RN72K1J-333JE	1	435033334R1	
R9005	METAL O R	RS1/2WBJ-220	1	443522214T	
R9006	C-CARBON R	RN72K1J-822JE	1	435038224R1	
R9007	METAL R	RNU1/2WCJ-2.2	1	453530224T	
R9008	C-CARBON R	RN72K1J-152JE	1	435031524R1	
R9009	METAL O R	RS1/2WBJ-10	1	442521004F	
R9010	METAL O R	RS1/2WBJ-82	1	443528204T	
R9011	METAL R	RNU1/2WCJ-4.7	1	453530474T	
R9012	C-CARBON R	RN72K1J-010JE	1	435030104R1	
R9013	C-CARBON R	RN72K1J-010JE	1	435030104R1	
R9014	C-CARBON R	RN72K1J-104JE	1	435031044R1	
R9017	C-CARBON R	RN72K1J-000JE	1	435030004R1	<PP>
R9018	C-CARBON R	RN72K1J-000JE	1	435030004R1	<DD>
R9020	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R9021	C-CARBON R	RN72K1J-152JE	1	435031524R1	
R9022	C-CARBON R	RN72K1J-104JE	1	435031044R1	
R9023	C-CARBON R	RN72K1J-682JE	1	435036824R1	
R9024	C-CARBON R	RN72K1J-333JE	1	435033334R1	
R9027	C-CARBON R	RN72K1J-103JE	1	435031034R1	

R9028	METAL R	RNU1/2WCJ-0.47	1	453534794T	
R9029	METAL R	RNU1/2WCJ-0.47	1	453534794T	
JL101A	WIRE HOL	NSCT-9P880	1	25051093	<DD>
JL101B	WIRE TRAP	NPLG-9P592	1	25055630	<DD>
JL5502B	WIRE TRAP	NPLG-7P590	1	25055628	<DD>
JL6402B	WIRE TRAP	NPLG-3P586	1	25055624	
JL6600B	SOCKET	NSCT-7P99	1	25050271	
JL6603B	SOCKET	NSCT-9P101	1	25050273	
JL6605B	SOCKET	NSCT-5P97	1	25050269	
JL8001A	WIRE HOL	NSCT-4P875	1	25051088	
JL901B	WIRE TRAP	NPLG-5P588	1	25055626	
JL9101B	SOCKET	NSCT-6P98	1	25050270	
P101A	SOCKET	NSCT-13P2106	1	25052209	
P131	PIN JACK	NPJ-2PDO445	1	25045640	
P131 or	PIN JACK	NPJ-2PDO0626	(1)	25045847	
P2001	SOCKET	CAM-C16	1	25053104R2	<DD>
P2004A	PLUG	IMSA-9163B-10G	1	25056587A	
P2004B	SOCKET	IMSA-9163S-10A	1	25053107	
P2005A	PLUG	IMSA-9163B-16G	1	25056588A	
P2005B	SOCKET	IMSA-9163S-16A	1	25053108	
P2006A	PLUG	IMSA-9163B-10G	1	25056587A	
P2006B	SOCKET	IMSA-9163S-10A	1	25053107	
P301A	SOCKET	NSCT-6P2186	1	25052289	
P302A	SOCKET	NSCT-14P2194	1	25052297	
P303A	SOCKET	NSCT-14P2194	1	25052297	
P304A	SOCKET	NSCT-3P2183	1	25052286	
P4001	PIN JACK	NPJ-6PDGLRGLR646	1	25045871	
P4002	PIN JACK	NPJ-6PDGLRGLR646	1	25045871	
P4003	PIN JACK	NPJ-10PDBY621	1	25045842	
P4003 or	PIN JACK	NPJ-10PDBY478	(1)	25045681	
P4004	PIN JACK	NPJ-10PDBY621	1	25045842	
P4004 or	PIN JACK	NPJ-10PDBY478	(1)	25045681	
P4005	PIN JACK	NPJ-10PDBY621	1	25045842	
P4005 or	PIN JACK	NPJ-10PDBY478	(1)	25045681	
P4006	PIN JACK	NPJ-5PDBY622	1	25045843	
P4006 or	PIN JACK	NPJ-5PDBY479	(1)	25045682	
P6601	TRM	NTM-6PDMC392	1	25060463	
P6602	TRM	NTM-4PDMC397	1	25060469	
P701A	SOCKET	52492-3620	1	25053110	
P751A	SOCKET	NSCT-9P2427	1	25052530	
P8003A	PLUG	NPLG-18P763	1	25055807	
RL6600	RELAY	NRL-2P5A-DC24-158	1	25065618	
RL6600 or	RELAY	NRL-2P5A-DC24-129	(1)	25065563A	
RL6602	RELAY	NRL-2P5A-DC24-158	1	25065618	
RL6602 or	RELAY	NRL-2P5A-DC24-129	(1)	25065563A	
RL6603	RELAY	NRL-2P5A-DC24-158	1	25065618	
RL6603 or	RELAY	NRL-2P5A-DC24-129	(1)	25065563A	
E2001	TRM(SCREW)	NEJITANSI M3	1	25065425	<DD>
E2002	TRM(SCREW)	NEJITANSI M3	1	25065425	<DD>
E2003	RETAINER	(XM)	1	27142044	<DD>
E4001	TRM(SCREW)	NEJITANSI M3	1	25065425	

PC BOARD PARTS LIST

HT-R640

U15	AMPLIFIER PC BOARD (NAAF-8911-1G/1H)
U16	SEC. TERMINAL-2 PC BOARD (NAPS-8912-1G/1H)
U17	THERMAL SENSOR PC BOARD (NAETC-8913-1G/1H)

CIRCUIT NO.	NAME	DESCRIPTION	Q'TY	PART NO(SN)	REMARKS
Q5501	IC	R2S15211FP	1	22242297R3	
Q5503	IC	NE5532APSR	1	22242283R2	
Q5600	TR	RN1441	1	2215410R2	
Q5603	TR	RN1441	1	2215410R2	
Q5604	TR	RN1441	1	2215410R2	
Q5605	TR	RN1441	1	2215410R2	
Q5606	TR	RN1441	1	2215410R2	
Q5607	TR	RN1441	1	2215410R2	
Q5610	TR	RN1441	1	2215410R2	
Q5630	IC	NE5532APSR	1	22242283R2	
Q5670	IC	78M12HF(NJM78M12FA)	1	222780125JRC	
Q5670 or	IC	78M12(AN78M12F)	(1)	222780125MAT	
Q5670 or	IC	78M12HF(MPC78M12HF)	(1)	222780125NEC	
Q5670A	HEAT SINK	RAD-196	1	27160545	
Q5670B	SCREW	3P+10FN(3BC)	1	82143010GR	
Q5670C	TAPE	TAPE(CLOTH-8U)	1	29110082	

Q5671	IC	79M12HF(NJM79M12FA)	1	222790125JRC
Q5671 or	IC	79M12F(AN79M12F)	(1)	222790125MAT
Q5671 or	IC	79M12HF(MPC79M12HF)	(1)	222790125NEC
Q5671B	SCREW	3P+10FN(3BC)	1	82143010GR
Q5684	TR	2SC1815-GR	1	2211255T
Q5685	TR	2SA1015-GR	1	2211455T
Q6000	TR	2SC1740S-S	1	2213285T
Q6001	TR	2SC1740S-S	1	2213285T
Q6002	TR	2SC1740S-S	1	2213285T
Q6003	TR	2SC1740S-S	1	2213285T
Q6004	TR	2SC1740S-S	1	2213285T
Q6010	TR	2SC1740S-S	1	2213285T
Q6011	TR	2SC1740S-S	1	2213285T
Q6012	TR	2SC1740S-S	1	2213285T
Q6013	TR	2SC1740S-S	1	2213285T
Q6014	TR	2SC1740S-S	1	2213285T
Q6030	TR	2SC5171(ONK_Q)	1	2203010
Q6030 or	TR	2SC5993-Q_P	(1)	2217161
Q6031	TR	2SC5171(ONK_Q)	1	2203010
Q6031 or	TR	2SC5993-Q_P	(1)	2217161
Q6032	TR	2SC5171(ONK_Q)	1	2203010
Q6032 or	TR	2SC5993-Q_P	(1)	2217161
Q6033	TR	2SC5171(ONK_Q)	1	2203010
Q6033 or	TR	2SC5993-Q_P	(1)	2217161
Q6034	TR	2SC5171(ONK_Q)	1	2203010
Q6034 or	TR	2SC5993-Q_P	(1)	2217161
Q6040	TR	2SA1930(ONK_Q)	1	2203000
Q6040 or	TR	2SA2140-Q_P	(1)	2217151
Q6041	TR	2SA1930(ONK_Q)	1	2203000
Q6041 or	TR	2SA2140-Q_P	(1)	2217151
Q6042	TR	2SA1930(ONK_Q)	1	2203000
Q6042 or	TR	2SA2140-Q_P	(1)	2217151
Q6043	TR	2SA1930(ONK_Q)	1	2203000
Q6043 or	TR	2SA2140-Q_P	(1)	2217151
Q6044	TR	2SA1930(ONK_Q)	1	2203000
Q6044 or	TR	2SA2140-Q_P	(1)	2217151
Q6070	TR	2SC2240-BL(TPE2_F)	1	2211406T
Q6070 or	TR	2SC2240-GR	(1)	2211405T
Q6071	TR	2SC2240-BL(TPE2_F)	1	2211406T
Q6071 or	TR	2SC2240-GR	(1)	2211405T
Q6072	TR	2SC2240-BL(TPE2_F)	1	2211406T
Q6072 or	TR	2SC2240-GR	(1)	2211405T
Q6073	TR	2SC2240-BL(TPE2_F)	1	2211406T
Q6073 or	TR	2SC2240-GR	(1)	2211405T
Q6074	TR	2SC2240-BL(TPE2_F)	1	2211406T
Q6074 or	TR	2SC2240-GR	(1)	2211405T
Q6380	IC	LM61CIZ	1	22242212
Q6380A	RETAINER	(PTH)	1	27141884-1
Q6701	TR	2SC2712-GR	1	2213145R2
Q6701 or	TR	KTC3875-GR	(1)	2216175R2
Q6702	TR	2SC2712-GR	1	2213145R2
Q6702 or	TR	KTC3875-GR	(1)	2216175R2
Q6703	TR	2SA1163-BL(TE85L_F)	1	2216756R2
Q6707	TR	2SC2712-GR	1	2213145R2
Q6707 or	TR	KTC3875-GR	(1)	2216175R2
D5671	ZENER D	DZ-7.5BSC	1	224850753T
D5671 or	ZENER D	MTZJ7.5C	(1)	224470753T
D5672	ZENER D	DZ-7.5BSC	1	224850753T
D5672 or	ZENER D	MTZJ7.5C	(1)	224470753T
D6000	C-DIODE	1SS352	1	223234R2
D6000 or	C-DIODE	1SS355	(1)	223269R2
D6000 or	C-DIODE	KDS4148U	(1)	223283R2
D6001	C-DIODE	1SS352	1	223234R2
D6001 or	C-DIODE	1SS355	(1)	223269R2
D6001 or	C-DIODE	KDS4148U	(1)	223283R2
D6002	C-DIODE	1SS352	1	223234R2
D6002 or	C-DIODE	1SS355	(1)	223269R2
D6002 or	C-DIODE	KDS4148U	(1)	223283R2
D6003	C-DIODE	1SS352	1	223234R2
D6003 or	C-DIODE	1SS355	(1)	223269R2
D6003 or	C-DIODE	KDS4148U	(1)	223283R2
D6004	C-DIODE	1SS352	1	223234R2
D6004 or	C-DIODE	1SS355	(1)	223269R2
D6004 or	C-DIODE	KDS4148U	(1)	223283R2
D6010	C-DIODE	1SS352	1	223234R2
D6010 or	C-DIODE	1SS355	(1)	223269R2

D6010 or	C-DIODE	KDS4148U	(1)	223283R2
D6011	C-DIODE	1SS352	1	223234R2
D6011 or	C-DIODE	1SS355	(1)	223269R2
D6011 or	C-DIODE	KDS4148U	(1)	223283R2
D6012	C-DIODE	1SS352	1	223234R2
D6012 or	C-DIODE	1SS355	(1)	223269R2
D6012 or	C-DIODE	KDS4148U	(1)	223283R2
D6013	C-DIODE	1SS352	1	223234R2
D6013 or	C-DIODE	1SS355	(1)	223269R2
D6013 or	C-DIODE	KDS4148U	(1)	223283R2
D6014	C-DIODE	1SS352	1	223234R2
D6014 or	C-DIODE	1SS355	(1)	223269R2
D6014 or	C-DIODE	KDS4148U	(1)	223283R2
D6701	C-DIODE	1SS352	1	223234R2
D6701 or	C-DIODE	1SS355	(1)	223269R2
D6701 or	C-DIODE	KDS4148U	(1)	223283R2
D6702	C-DIODE	1SS352	1	223234R2
D6702 or	C-DIODE	1SS355	(1)	223269R2
D6702 or	C-DIODE	KDS4148U	(1)	223283R2
D6703	ZENER D	UDZS5.1B	1	224550510R2
D6703 or	ZENER D	MAZ8051-M	(1)	224750512R2
D6704	ZENER D	UDZS5.1B	1	224550510R2
D6704 or	ZENER D	MAZ8051-M	(1)	224750512R2
D6901	DIODE	D10XB60H	1	22380337
D6901A	HEAT SINK	RAD-196	1	27160545
D6901B	TAPE	TAPE(CLOTH-8U)	1	29110082
D6901C	SCREW	3P+10FN(3BC)	2	82143010GR
D6902	C-DIODE	1SS352	1	223234R2
D6902 or	C-DIODE	1SS355	(1)	223269R2
D6902 or	C-DIODE	KDS4148U	(1)	223283R2
D6903	DIODE	D10XB60H	1	22380337
D9001	DIODE	RL1N4003	1	22380260T
D9001 or	DIODE	GP104003E	(1)	22380035T
D9002	DIODE	RL1N4003	1	22380260T
D9002 or	DIODE	GP104003E	(1)	22380035T
D9003	DIODE	RL1N4003	1	22380260T
D9003 or	DIODE	GP104003E	(1)	22380035T
D9004	DIODE	RL1N4003	1	22380260T
D9004 or	DIODE	GP104003E	(1)	22380035T
C5503	TF C	ECQ-B50V-221K	1	374722215T
C5504	TF C	ECQ-B50V-221K	1	374722215T
C5507	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5508	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5509	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5510	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5513	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5514	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5517	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5518	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5519	TF C	ECQ-B50V-221K	1	374722215T
C5520	TF C	ECQ-B50V-221K	1	374722215T
C5521	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5522	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5523	C-CERA C	CC725CH1H-221J1	1	342102214R1
C5524	TF C	ECQ-B50V-221K	1	374722215T
C5551	VX C	CE04W25V-47M(VX)	1	393354707T
C5552	VX C	CE04W25V-47M(VX)	1	393354707T
C5553	VX C	CE04W25V-47M(VX)	1	393354707T
C5554	VX C	CE04W25V-47M(VX)	1	393354707T
C5555	VX C	CE04W25V-47M(VX)	1	393354707T
C5556	VX C	CE04W25V-47M(VX)	1	393354707T
C5557	VX C	CE04W25V-47M(VX)	1	393354707T
C5558	VX C	CE04W25V-47M(VX)	1	393354707T
C5559	TF C	ECQ-V50V-474J	1	374724744T
C5560	TF C	ECQ-V50V-823J	1	374728234T
C5561	TF C	ECQ-B50V-223J	1	374722234T
C5562	TF C	ECQ-V50V-474J	1	374724744T
C5563	TF C	ECQ-V50V-823J	1	374728234T
C5564	TF C	ECQ-B50V-223J	1	374722234T
C5565	VX C	CE04W25V-47M(VX)	1	393354707T
C5566	VX C	CE04W25V-47M(VX)	1	393354707T
C5569	VX C	CE04W50V 47M(VX_BLK)	1	397384707T
C5570	VX C	CE04W50V 47M(VX_BLK)	1	397384707T
C5571	VX C	CE04W50V 47M(VX_BLK)	1	397384707T
C5572	VX C	CE04W50V 47M(VX_BLK)	1	397384707T
C5573	VX C	CE04W50V 47M(VX_BLK)	1	397384707T

C5576	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C5590	C-CERA C	CC725CH1H-330J1	1	342103304R1	
C5591	C-CERA C	CC725CH1H-330J1	1	342103304R1	
C5600	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C5603	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C5604	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C5605	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C5606	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C5607	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C5630	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C5631	C-CERA C	CC725CH1H-221J1	1	342102214R1	
C5632	TF C	ECQ-B50V-103J	1	374721034T	
C5666	VX C	CE04W25V-220M(VX)	1	393352217T	
C5667	VX C	CE04W25V-220M(VX)	1	393352217T	
C5670	VX C	CE04W50V-10M(VX_BLK)	1	397381007T	
C5671	VX C	CE04W50V-10M(VX_BLK)	1	397381007T	
C5672	VX C	CE04W25V-220M(VX)	1	393352217T	
C5673	VX C	CE04W25V-220M(VX)	1	393352217T	
C5674	VX C	CE04W16V-470M(VX)	1	393344717T	
C5675	VX C	CE04W16V-470M(VX)	1	393344717T	
C5684	VX C	CE04W25V-220M(VX)	1	393352217T	
C5685	VX C	CE04W25V-220M(VX)	1	393352217T	
C5701	C-CERA C	CC725CH1H-102J1	1	342101024R1	
C5702	C-CERA C	CC725CH1H-102J1	1	342101024R1	
C5703	C-CERA C	CC725CH1H-102J1	1	342101024R1	
C5704	C-CERA C	CC725CH1H-102J1	1	342101024R1	
C5705	C-CERA C	CC725CH1H-102J1	1	342101024R1	
C5706	C-CERA C	CC725CH1H-102J1	1	342101024R1	
C5708	C-CERA C	CC725CH1H-221J1	1	342102214R1	
C6030	TF C	ECQ-V50V-473J	1	374724734T	
C6031	TF C	ECQ-V50V-473J	1	374724734T	
C6032	TF C	ECQ-V50V-473J	1	374724734T	
C6033	TF C	ECQ-V50V-473J	1	374724734T	
C6034	TF C	ECQ-V50V-473J	1	374724734T	
C6040	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C6041	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C6042	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C6043	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C6044	VX C	CE04W50V 47M(VX_BLK)	1	397384707T	
C6050	TF C	ECQ-B50V-103J	1	374721034T	
C6051	TF C	ECQ-B50V-103J	1	374721034T	
C6052	TF C	ECQ-B50V-103J	1	374721034T	
C6053	TF C	ECQ-B50V-103J	1	374721034T	
C6054	TF C	ECQ-B50V-103J	1	374721034T	
C6701	VX C	CE04W25V-100M(VX)	1	393351017T	
C6703	C-CERA C	CK725F1H-104Z1	1	332151040R1	
C6704	VX C	CE04W50V-1M(VX_BLK)	1	397380107T	
C6706	VX C	CE04W50V-10M(VX_BLK)	1	397381007T	
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C6901 or	ELECT C	CE69W63V-10000MB	(1)	3504418	<DD>
C6901	ELECT C	CE69W69V-10000MA	1	3504425	<PP>
C6901A	TAPE	TAPE(CLOTH-16U)	1	29110083	
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C6911	C-CERA C	CC725CH1H-102J1	1	342101024R1	
C6912	TF C	ECQ-V100-334J	1	374733344T	
C6913	TF C	ECQ-V100-334J	1	374733344T	
C6915	TF C	ECQ-V50V-104J	1	374721044T	
C6916	TF C	ECQ-V50V-104J	1	374721044T	
C9001	MMT C	MMT50V-334J	1	375523344T	
C9003	VR C	CE04W35V-1000M(VR)	1	394661027S	
C9004	VR C	CE04W35V-470M(VR)	1	394664717S	
R5500	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5503	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5504	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5505	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5506	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5507	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5508	C-CARBON R	RN72K1J-331JE	1	435033314R1	
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R5510	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5511	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5512	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5513	C-CARBON R	RN72K1J-331JE	1	435033314R1	

R5514	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5515	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5516	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5517	C-CARBON R	RN72K1J-331JE	1	435033314R1	
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R5521	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5522	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5523	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5524	C-CARBON R	RN72K1J-331JE	1	435033314R1	
R5531	C-CARBON R	RN72K1J-101JE	1	435031014R1	
R5541	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5542	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5543	C-CARBON R	RN72K1J-224JE	1	435032244R1	
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R5545	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5546	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5547	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5548	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5549	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5550	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5551	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5552	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5553	C-CARBON R	RN72K1J-224JE	1	435032244R1	
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R5555	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5556	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5557	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5558	C-CARBON R	RN72K1J-224JE	1	435032244R1	
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R5562	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5563	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5564	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5571	C-CARBON R	RN72K1J-223JE	1	435032234R1	
R5575	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5576	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5577	C-CARBON R	RN72K1J-473JE	1	435034734R1	
R5578	C-CARBON R	RN72K1J-473JE	1	435034734R1	
R5579	C-CARBON R	RN72K1J-224JE	1	435032244R1	
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R5585	C-CARBON R	RN72K1J-182JE	1	435031824R1	
R5586	C-CARBON R	RN72K1J-182JE	1	435031824R1	
R5587	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R5588	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R5589	CARBON R	R16J-1K	1	417341024T	
R5590	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R5591	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R5592	C-CARBON R	RN72K1J-471JE	1	435034714R1	
R5593	C-CARBON R	RN72K1J-122JE	1	435031224R1	
R5594	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R5595	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R5596	C-CARBON R	RN72K1J-471JE	1	435034714R1	
R5597	C-CARBON R	RN72K1J-122JE	1	435031224R1	
R5598	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R5599	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R5600	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5603	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5604	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5605	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5606	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5607	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R5610	C-CARBON R	RN72K1J-271JE	1	435032714R1	
R5613	C-CARBON R	RN72K1J-222JE	1	435032224R1	
R5614	C-CARBON R	RN72K1J-222JE	1	435032224R1	
R5615	C-CARBON R	RN72K1J-222JE	1	435032224R1	
R5616	C-CARBON R	RN72K1J-222JE	1	435032224R1	
R5617	C-CARBON R	RN72K1J-222JE	1	435032224R1	
R5620	C-CARBON R	RN72K1J-101JE	1	435031014R1	
R5623	C-CARBON R	RN72K1J-000JE	1	435030004R1	
R5624	C-CARBON R	RN72K1J-000JE	1	435030004R1	

R5625	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5626	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5627	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5630	C-CARBON R	RN72K1J-221JE	1	435032214R1
R5631	C-CARBON R	RN72K1J-473JE	1	435034734R1
R5632	C-CARBON R	RN72K1J-153JE	1	435031534R1
R5633	C-CARBON R	RN72K1J-122JE	1	435031224R1
R5634	C-CARBON R	RN72K1J-103JE	1	435031034R1
R5660	METAL R	RNU1WCJ-2.2	1	453630224T
R5661	METAL R	RNU1WCJ-2.2	1	453630224T
R5666	CARBON R	R16J-22	1	417342204T
R5667	CARBON R	R16J-22	1	417342204T
R5670	METAL O R	RS2WBJ-47	1	441724704F
R5671	METAL O R	RS2WBJ-68	1	441726804F
R5672	METAL O R	RS2WBJ-47	1	441724704F
R5673	METAL O R	RS2WBJ-68	1	441726804F
R5674	METAL O R	RS1WBJ-68	1	443626804T
R5675	METAL O R	RS1WBJ-68	1	443626804T
R5677	METAL O R	RS2WBJ-8.2	1	441720824F
R5678	METAL O R	RS2WBJ-8.2	1	441720824F
R5681	C-CARBON R	RN72K1J-224JE	1	435032244R1
R5684	CARBON R	R16J-680	1	417346814T
R5685	CARBON R	R16J-680	1	417346814T
R5800	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5801	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5807	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5808	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5809	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5810	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5811	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5812	C-CARBON R	RN72K1J-000JE	1	435030004R1
R5820	C-CARBON R	RN72K1J-000JE	1	435030004R1
R6000	CARBON R	R16J-5.6K	1	417345624T
R6001	CARBON R	R16J-5.6K	1	417345624T
R6002	CARBON R	R16J-5.6K	1	417345624T
R6003	CARBON R	R16J-5.6K	1	417345624T
R6004	CARBON R	R16J-5.6K	1	417345624T
R6010	CARBON R	R16J-3.9K	1	417343924T
R6011	CARBON R	R16J-3.9K	1	417343924T
R6012	CARBON R	R16J-3.9K	1	417343924T
R6013	CARBON R	R16J-3.9K	1	417343924T
R6014	CARBON R	R16J-3.9K	1	417343924T
R6020	NF CARBON R	R25J-2.2	1	415470224T
R6021	NF CARBON R	R25J-2.2	1	415470224T
R6022	NF CARBON R	R25J-2.2	1	415470224T
R6023	NF CARBON R	R25J-2.2	1	415470224T
R6024	NF CARBON R	R25J-2.2	1	415470224T
R6030	CARBON R	R16J-470	1	417344714T
R6031	CARBON R	R16J-470	1	417344714T
R6032	CARBON R	R16J-470	1	417344714T
R6033	CARBON R	R16J-470	1	417344714T
R6034	CARBON R	R16J-470	1	417344714T
R6040	TRIM R	N06HR2KBC	1	5210390T
R6041	TRIM R	N06HR2KBC	1	5210390T
R6042	TRIM R	N06HR2KBC	1	5210390T
R6043	TRIM R	N06HR2KBC	1	5210390T
R6044	TRIM R	N06HR2KBC	1	5210390T
R6050	CARBON R	R16J-3.3K	1	417343324T
R6051	CARBON R	R16J-3.3K	1	417343324T
R6052	CARBON R	R16J-3.3K	1	417343324T
R6053	CARBON R	R16J-3.3K	1	417343324T
R6054	CARBON R	R16J-3.3K	1	417343324T
R6070	NF CARBON R	R25J-82	1	415478204T
R6071	NF CARBON R	R25J-82	1	415478204T
R6072	NF CARBON R	R25J-82	1	415478204T
R6073	NF CARBON R	R25J-100	1	415471014T
R6074	NF CARBON R	R25J-100	1	415471014T
R6080	NF CARBON R	R25J-0.22	1	415472294T
R6081	NF CARBON R	R25J-0.22	1	415472294T
R6082	NF CARBON R	R25J-0.22	1	415472294T
R6083	NF CARBON R	R25J-0.22	1	415472294T
R6084	NF CARBON R	R25J-0.22	1	415472294T
R6090	NF CARBON R	R25J-0.22	1	415472294T
R6091	NF CARBON R	R25J-0.22	1	415472294T
R6092	NF CARBON R	R25J-0.22	1	415472294T
R6093	NF CARBON R	R25J-0.22	1	415472294T

R6094	NF CARBON R	R25J-0.22	1	415472294T	
R6100	METAL PR	MPR5W+5W 0R22	1	4000233	
R6100 or	METAL PR	RGC55 0.22	(1)	4000132	
R6101	METAL PR	MPR5W+5W 0R22	1	4000233	
R6101 or	METAL PR	RGC55 0.22	(1)	4000132	
R6102	METAL PR	MPR5W+5W 0R22	1	4000233	
R6102 or	METAL PR	RGC55 0.22	(1)	4000132	
R6103	METAL PR	MPR5W+5W 0R22	1	4000233	
R6103 or	METAL PR	RGC55 0.22	(1)	4000132	
R6104	METAL PR	MPR5W+5W 0R22	1	4000233	
R6104 or	METAL PR	RGC55 0.22	(1)	4000132	
R6130	METAL R	RNU1WCJ-8.2	1	453630824T	
R6131	METAL R	RNU1WCJ-8.2	1	453630824T	
R6132	METAL R	RNU1WCJ-8.2	1	453630824T	
R6133	METAL R	RNU1WCJ-8.2	1	453630824T	
R6134	METAL R	RNU1WCJ-8.2	1	453630824T	
R6140	C-CARBON R	RN72K1J-223JE	1	435032234R1	
R6141	C-CARBON R	RN72K1J-223JE	1	435032234R1	
R6142	C-CARBON R	RN72K1J-223JE	1	435032234R1	
R6143	C-CARBON R	RN72K1J-223JE	1	435032234R1	
R6144	C-CARBON R	RN72K1J-223JE	1	435032234R1	
R6150	C-CARBON R	RN72K1J-123JE	1	435031234R1	
R6151	C-CARBON R	RN72K1J-123JE	1	435031234R1	
R6152	C-CARBON R	RN72K1J-123JE	1	435031234R1	
R6153	C-CARBON R	RN72K1J-123JE	1	435031234R1	
R6154	C-CARBON R	RN72K1J-123JE	1	435031234R1	
R6160	CARBON R	R16J-33K	1	417343334T	
R6161	CARBON R	R16J-33K	1	417343334T	
R6162	CARBON R	R16J-33K	1	417343334T	
R6163	CARBON R	R16J-33K	1	417343334T	
R6164	CARBON R	R16J-33K	1	417343334T	
R6170	CARBON R	R16J-47K	1	417344734T	
R6171	CARBON R	R16J-47K	1	417344734T	
R6172	CARBON R	R16J-47K	1	417344734T	
R6173	CARBON R	R16J-47K	1	417344734T	
R6174	CARBON R	R16J-47K	1	417344734T	
R6180	CARBON R	R16J-47K	1	417344734T	
R6181	CARBON R	R16J-47K	1	417344734T	
R6182	CARBON R	R16J-47K	1	417344734T	
R6183	CARBON R	R16J-47K	1	417344734T	
R6184	CARBON R	R16J-47K	1	417344734T	
R6190	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R6191	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R6192	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R6193	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R6194	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R6197	METAL O R	RS1WBJ-100	1	443621014T	
R6701	C-CARBON R	RN72K1J-223JE	1	435032234R1	
R6702	C-CARBON R	RN72K1J-103JE	1	435031034R1	
R6704	C-CARBON R	RN72K1J-473JE	1	435034734R1	
R6706	C-CARBON R	RN72K1J-224JE	1	435032244R1	
R6708	C-CARBON R	RN72K1J-333JE	1	435033334R1	
R6709	C-CARBON R	RN72K1J-562JE	1	435035624R1	
R6710	C-CARBON R	RN72K1J-123JE	1	435031234R1	
R6902	C-CARBON R	RN72K1J-102JE	1	435031024R1	
R6903	C-CARBON R	RN72K1J-473JE	1	435034734R1	
F6901A	FUSE HOLDER	SN5051	1	250113	
F6901B	FUSE HOLDER	SN5051	1	250113	
F6902A	FUSE HOLDER	SN5051	1	250113	
F6902B	FUSE HOLDER	SN5051	1	250113	
JL5502A	WIRE HOL	NSCT-7P878	1	25051091	<DD>
JL6402A	WIRE HOL	NSCT-3P874	1	25051087	
JL6600A	WIRE HOL	NSCT-7P898	1	25051111	
JL6603A	WIRE HOL	NSCT-9P900	1	25051113	
JL6952A	WIRE HOL	NSCT-4P895	1	25051108	
JL6952B	WIRE HOL	NSCT-4P895	1	25051108	
P301	PLUG	NPLG-6P0961	1	25056011	
P302	PLUG	NPLG-14P0969	1	25056019	
P303	PLUG	NPLG-14P0969	1	25056019	
P304	PLUG	NPLG-3P0958	1	25056008	
P5503	CRIMP AS	CRIMP AS	1	2069955120UL	
P5504	SOCKET AS	NSAS-26P1612	1	2009991020UL	
P5505	TRM(SCREW)	NEJITANSI M3	1	25065425	
P5507	TRM	NTM-1P232(M1700)	1	25060301	
P6000B	PLUG	NPLG-5P0960	1	25056010	
P6001B	PLUG	NPLG-5P0960	1	25056010	

P6002B	PLUG	NPLG-5P0960	1	25056010	
P6003B	PLUG	NPLG-5P0960	1	25056010	
P6004B	PLUG	NPLG-5P0960	1	25056010	
P6011A	RETAINER	(BUS-D)	1	27142035	
P6050	HOLDER	HOLDER(CLAMP)	1	27190540-1	
P6080	PLUG	NPLG-2P29	1	25055038	
P6081	PLUG	NPLG-2P29	1	25055038	
P6082	PLUG	NPLG-2P29	1	25055038	
P6083	PLUG	NPLG-2P29	1	25055038	
P6084	PLUG	NPLG-2P29	1	25055038	
P6100	HOLDER	HOLDER(CLAMP)	1	27190540-1	
P6101	HOLDER	(CRAMP) UA-0 V0	1	27190608-1	
P6102	HOLDER	(CRAMP) UA-0 V0	1	27190608-1	
P6900	CRIMP AS	CRIMP AS	1	20799165UL	
P6901	CRIMP AS	CRIMP AS	1	2069925189UL	
P6902	CRIMP AS	CRIMP AS	1	2069925266UL	
P6903	CRIMP AS	CRIMP AS	1	20799163UL	
P6904	CRIMP AS	CRIMP AS	1	20799164UL	
P6910	CRIMP AS	PVCAS-TXSR604	1	20799167UL	
P6991	TRM(SCREW)	NEJITANSI M3	1	25065425	
P7900	ST JACK	LG Y2502-0200FC	1	25045696	
P7902	PIN JACK	NPJ-6PDWWWRRR561	1	25045779	
P7902 or	PIN JACK	NPJ-6PDBL159	(1)	25045300	
P7903	PIN JACK	NPJ-4PDWWRR624	1	25045845	
P7903 or	PIN JACK	NPJ-4PDBL162	(1)	25045303	
P7904	PIN JACK	NPJ-6PDWWWRRR561	1	25045779	
P7904 or	PIN JACK	NPJ-6PDBL159	(1)	25045300	
P7905	PIN JACK	NPJ-6PDWLGREP562	1	25045780	
P7905 or	PIN JACK	NPJ-6PWRLGGP493	(1)	25045697	
P7908	PIN JACK	NPJ-1PDP555	1	25045773	
RL6901	RELAY	NRL-1P10A-DC12-140	1	25065584	
RL6901 or	RELAY	NRL-1P10A-DC12-143	(1)	25065588	
RL6901A	TAPE	TAPE(CLOTH-16U)	1	29110083	
RL6902	RELAY	NRL-1P10A-DC12-140	1	25065584	
RL6902 or	RELAY	NRL-1P10A-DC12-143	(1)	25065588	
RL6902A	TAPE	TAPE(CLOTH-16U)	1	29110083	

HT-R640

PC BOARD PARTS LIST

U19 DRIVER AMPLIFIER PC BOARD (NAAF-8917-1E/1F)

CIRCUIT NO.	NAME	DESCRIPTION	Q'TY	PART NO(SN)	REMARKS
Q5000	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5001	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5002	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5003	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5004	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5010	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5011	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5012	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5013	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5014	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5030	TR	2SA949-Y(TPE6_F)	1	2211354T	
Q5031	TR	2SA949-Y(TPE6_F)	1	2211354T	
Q5032	TR	2SA949-Y(TPE6_F)	1	2211354T	
Q5033	TR	2SA949-Y(TPE6_F)	1	2211354T	
Q5034	TR	2SA949-Y(TPE6_F)	1	2211354T	
Q5040	TR	2SC2229-Y(TPE6_F)	1	2211634T	
Q5041	TR	2SC2229-Y(TPE6_F)	1	2211634T	
Q5042	TR	2SC2229-Y(TPE6_F)	1	2211634T	
Q5043	TR	2SC2229-Y(TPE6_F)	1	2211634T	
Q5044	TR	2SC2229-Y(TPE6_F)	1	2211634T	
Q5050	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5050 or	TR	2SC2240-GR	(1)	2211405T	
Q5051	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5051 or	TR	2SC2240-GR	(1)	2211405T	
Q5052	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5052 or	TR	2SC2240-GR	(1)	2211405T	
Q5053	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5053 or	TR	2SC2240-GR	(1)	2211405T	
Q5054	TR	2SC2240-BL(TPE2_F)	1	2211406T	
Q5054 or	TR	2SC2240-GR	(1)	2211405T	
D5000	ZENER D	DZ-5.6BSB	1	224850562T	
D5000 or	ZENER D	MTZJ5.6B	(1)	224470562T	
D5001	ZENER D	DZ-5.6BSB	1	224850562T	

D5001 or	ZENER D	MTZJ5.6B	(1)	224470562T
D5002	ZENER D	DZ-5.6BSB	1	224850562T
D5002 or	ZENER D	MTZJ5.6B	(1)	224470562T
D5003	ZENER D	DZ-5.6BSB	1	224850562T
D5003 or	ZENER D	MTZJ5.6B	(1)	224470562T
D5004	ZENER D	DZ-5.6BSB	1	224850562T
D5004 or	ZENER D	MTZJ5.6B	(1)	224470562T
C5000	TF C	ECQ-B50V-221K	1	374722215T
C5001	TF C	ECQ-B50V-221K	1	374722215T
C5002	TF C	ECQ-B50V-221K	1	374722215T
C5003	TF C	ECQ-B50V-221K	1	374722215T
C5004	TF C	ECQ-B50V-221K	1	374722215T
C5010	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5011	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5012	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5013	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5014	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5020	VX C	CE04W50V-10M(VX_BLK)	1	397381007T
C5021	VX C	CE04W50V-10M(VX_BLK)	1	397381007T
C5022	VX C	CE04W50V-10M(VX_BLK)	1	397381007T
C5023	VX C	CE04W50V-10M(VX_BLK)	1	397381007T
C5024	VX C	CE04W50V-10M(VX_BLK)	1	397381007T
C5040	VX C	CE04W25V-220M(VX)	1	393352217T
C5041	VX C	CE04W25V-220M(VX)	1	393352217T
C5042	VX C	CE04W25V-220M(VX)	1	393352217T
C5043	VX C	CE04W25V-220M(VX)	1	393352217T
C5044	VX C	CE04W25V-220M(VX)	1	393352217T
C5050	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5051	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5052	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5053	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5054	VX C	CE04W50V-47M(VX_BLK)	1	397384707T
C5080	CERA C	CC45SL50V-040D	1	345020402T
C5081	CERA C	CC45SL50V-040D	1	345020402T
C5082	CERA C	CC45SL50V-040D	1	345020402T
C5083	CERA C	CC45SL50V-040D	1	345020402T
C5084	CERA C	CC45SL50V-040D	1	345020402T
C5090	TF C	ECQ-B50V-101K	1	374721015T
C5091	TF C	ECQ-B50V-101K	1	374721015T
C5092	TF C	ECQ-B50V-101K	1	374721015T
C5093	TF C	ECQ-B50V-101K	1	374721015T
C5094	TF C	ECQ-B50V-101K	1	374721015T
C5100	VR C	CE04W100V-22M(VR)	1	394692207T
C5101	VR C	CE04W100V-22M(VR)	1	394692207T
C5102	VR C	CE04W100V-22M(VR)	1	394692207T
C5103	VR C	CE04W100V-22M(VR)	1	394692207T
C5104	VR C	CE04W100V-22M(VR)	1	394692207T
C5110	VR C	CE04W100V-22M(VR)	1	394692207T
C5111	VR C	CE04W100V-22M(VR)	1	394692207T
C5112	VR C	CE04W100V-22M(VR)	1	394692207T
C5113	VR C	CE04W100V-22M(VR)	1	394692207T
C5114	VR C	CE04W100V-22M(VR)	1	394692207T
R5000	CARBON R	R16J-1K	1	417341024T
R5001	CARBON R	R16J-1K	1	417341024T
R5002	CARBON R	R16J-1K	1	417341024T
R5003	CARBON R	R16J-1K	1	417341024T
R5004	CARBON R	R16J-1K	1	417341024T
R5010	CARBON R	R16J-56K	1	417345634T
R5011	CARBON R	R16J-56K	1	417345634T
R5012	CARBON R	R16J-56K	1	417345634T
R5013	CARBON R	R16J-56K	1	417345634T
R5014	CARBON R	R16J-56K	1	417345634T
R5020	CARBON R	R16J-330	1	417343314T
R5021	CARBON R	R16J-330	1	417343314T
R5022	CARBON R	R16J-330	1	417343314T
R5023	CARBON R	R16J-330	1	417343314T
R5024	CARBON R	R16J-330	1	417343314T
R5030	CARBON R	R16J-120K	1	417341244T
R5031	CARBON R	R16J-120K	1	417341244T
R5032	CARBON R	R16J-120K	1	417341244T
R5033	CARBON R	R16J-120K	1	417341244T
R5034	CARBON R	R16J-120K	1	417341244T
R5040	CARBON R	R16J-2.2K	1	417342224T
R5041	CARBON R	R16J-2.2K	1	417342224T
R5042	CARBON R	R16J-2.2K	1	417342224T
R5043	CARBON R	R16J-2.2K	1	417342224T

R5044	CARBON R	R16J-2.2K	1	417342224T
R5050	CARBON R	R16J-4.7K	1	417344724T
R5051	CARBON R	R16J-4.7K	1	417344724T
R5052	CARBON R	R16J-4.7K	1	417344724T
R5053	CARBON R	R16J-4.7K	1	417344724T
R5054	CARBON R	R16J-4.7K	1	417344724T
R5060	CARBON R	R16J-1.2K	1	417341224T
R5061	CARBON R	R16J-1.2K	1	417341224T
R5062	CARBON R	R16J-1.2K	1	417341224T
R5063	CARBON R	R16J-1.2K	1	417341224T
R5064	CARBON R	R16J-1.2K	1	417341224T
R5080	CARBON R	R16J-470	1	417344714T
R5081	CARBON R	R16J-470	1	417344714T
R5082	CARBON R	R16J-470	1	417344714T
R5083	CARBON R	R16J-470	1	417344714T
R5084	CARBON R	R16J-470	1	417344714T
R5090	CARBON R	R16J-100K	1	417341044T
R5091	CARBON R	R16J-100K	1	417341044T
R5092	CARBON R	R16J-100K	1	417341044T
R5093	CARBON R	R16J-100K	1	417341044T
R5094	CARBON R	R16J-100K	1	417341044T
R5100	CARBON R	R16J-100K	1	417341044T
R5101	CARBON R	R16J-100K	1	417341044T
R5102	CARBON R	R16J-100K	1	417341044T
R5103	CARBON R	R16J-100K	1	417341044T
R5104	CARBON R	R16J-100K	1	417341044T
R5110	CARBON R	R16J-1K	1	417341024T
R5111	CARBON R	R16J-1K	1	417341024T
R5112	CARBON R	R16J-1K	1	417341024T
R5113	CARBON R	R16J-1K	1	417341024T
R5114	CARBON R	R16J-1K	1	417341024T
R5130	CARBON R	R16J-18K	1	417341834T
R5131	CARBON R	R16J-18K	1	417341834T
R5132	CARBON R	R16J-18K	1	417341834T
R5133	CARBON R	R16J-22K	1	417342234T
R5134	CARBON R	R16J-22K	1	417342234T
R5160	NF CARBON R	R25J-100	1	415471014T
R5161	NF CARBON R	R25J-100	1	415471014T
R5162	NF CARBON R	R25J-100	1	415471014T
R5163	NF CARBON R	R25J-100	1	415471014T
R5164	NF CARBON R	R25J-100	1	415471014T
R5170	NF CARBON R	R25J-100	1	415471014T
R5171	NF CARBON R	R25J-100	1	415471014T
R5172	NF CARBON R	R25J-100	1	415471014T
R5173	NF CARBON R	R25J-100	1	415471014T
R5174	NF CARBON R	R25J-100	1	415471014T
R5180	NF CARBON R	R25J-10	1	415471004T
R5181	NF CARBON R	R25J-10	1	415471004T
R5182	NF CARBON R	R25J-10	1	415471004T
R5183	NF CARBON R	R25J-10	1	415471004T
R5184	NF CARBON R	R25J-10	1	415471004T
R5190	NF CARBON R	R25J-10	1	415471004T
R5191	NF CARBON R	R25J-10	1	415471004T
R5192	NF CARBON R	R25J-10	1	415471004T
R5193	NF CARBON R	R25J-10	1	415471004T
R5194	NF CARBON R	R25J-10	1	415471004T
R5200	CARBON R	R16J-18K	1	417341834T
R5201	CARBON R	R16J-18K	1	417341834T
R5202	CARBON R	R16J-18K	1	417341834T
R5203	CARBON R	R16J-22K	1	417342234T
R5204	CARBON R	R16J-22K	1	417342234T
R5230	CARBON R	R16J-120K	1	417341244T
R5231	CARBON R	R16J-120K	1	417341244T
R5232	CARBON R	R16J-120K	1	417341244T
R5233	CARBON R	R16J-120K	1	417341244T
R5234	CARBON R	R16J-120K	1	417341244T
P5019	TRM	NTM-1P233(M1969)	1	25060302
P5504A	PLUG	NPLG-13P141	1	25055157
P6000A	SOCKET	NSCT-5P2185	1	25052288
P6001A	SOCKET	NSCT-5P2185	1	25052288
P6002A	SOCKET	NSCT-5P2185	1	25052288
P6003A	SOCKET	NSCT-5P2185	1	25052288
P6004A	SOCKET	NSCT-5P2185	1	25052288
P6011B	RETAINER	(BUS-U)	1	27141859

PC BOARD PARTS LIST

U21 HDMI PC BOARD (NAVD-8928-1A)

CIRCUIT NO.	NAME	DESCRIPTION	Q'TY	PART NO(SN)	REMARKS
Q8305	IC	NJM2860F3-05	1	22242105R2	
Q8306	IC	TC7SZ08FU(TE85L_F)	1	22242071R2TO	
Q8308	TR	DTA144EE	1	2216380R2	
Q8309	TR ARRAY	UM6K1N	1	226066R2	
Q8309 or	TR ARRAY	UPA672T	(1)	226067R2	
Q8401	IC	SIH9030CTU-7	1	22242325R3	
Q8404	IC	XC6213B332MR	1	22242277R2	
Q8501	IC	SIH9033	1	22242324R3	
Q8503	TR ARRAY	UM6K1N	1	226066R2	
Q8503 or	TR ARRAY	UPA672T	(1)	226067R2	
Q8504	TR ARRAY	UM6K1N	1	226066R2	
Q8504 or	TR ARRAY	UPA672T	(1)	226067R2	
Q8505	TR ARRAY	UM6K1N	1	226066R2	
Q8505 or	TR ARRAY	UPA672T	(1)	226067R2	
Q8506	IC	BR24L02FV-W	1	22242069R2	
Q8506 or	IC	S-24CS02AFT-V-G	(1)	22242360R2	
Q8510	TR	DTA144EE	1	2216380R2	
Q8591	IC	NJM2391DL1-33	1	22278033DR2JR	
Q8591 or	IC	BA33BC0FP	(1)	22278033DR2RH	
Q8591 or	IC	MPC2933T	(1)	22278033DR2NE	
Q8591 or	IC	TA48033AF(TE16L_NQ)	(1)	22278033DR2TO	
Q8592	IC	BA18BC0FP	1	22278018DR2RH	
Q8592 or	IC	MPC2918T	(1)	22278018ER2NE	
Q8592 or	IC	TA48018AF(TE16L_NQ)	(1)	22278018DR2TO	
Q8593	IC	SI8008TM	1	22242323R2	
Q8595	IC	BA18BC0FP	1	22278018DR2RH	
Q8595 or	IC	MPC2918T	(1)	22278018ER2NE	
Q8595 or	IC	TA48018AF(TE16L_NQ)	(1)	22278018DR2TO	
Q8602	IC	XC6213B332MR	1	22242277R2	
Q8603	TR ARRAY	UM6K1N	1	226066R2	
Q8603 or	TR ARRAY	UPA672T	(1)	226067R2	
Q8604	TR ARRAY	UM6K1N	1	226066R2	
Q8604 or	TR ARRAY	UPA672T	(1)	226067R2	
Q8605	TR ARRAY	UM6K1N	1	226066R2	
Q8605 or	TR ARRAY	UPA672T	(1)	226067R2	
Q8606	IC	BR24L02FV-W	1	22242069R2	
Q8606 or	IC	S-24CS02AFT-V-G	(1)	22242360R2	
Q8610	TR	DTA144EE	1	2216380R2	
Q8701	IC	MPD70F3716GC-8EA	1	222W0054R3	
D8301	C-DIODE	1SS226(TE85L_F)	1	223266R2	
D8301 or	DIODE	DAN217T146	(1)	223285R2	
D8461	C-DIODE	1SS226(TE85L_F)	1	223266R2	
D8461 or	DIODE	DAN217T146	(1)	223285R2	
D8501	C-DIODE	1SS226(TE85L_F)	1	223266R2	
D8501 or	DIODE	DAN217T146	(1)	223285R2	
D8591	C-DIODE	CRS09(TE85L_Q)	1	223274R2	
D8601	C-DIODE	1SS226(TE85L_F)	1	223266R2	
D8601 or	DIODE	DAN217T146	(1)	223285R2	
D8701	C-DIODE	KDS4148U	1	223283R2	
D8701 or	C-DIODE	1SS352	(1)	223234R2	
D8701 or	C-DIODE	1SS355	(1)	223269R2	
D8701 or	C-DIODE	MA2J111	(1)	223279R2	
L8401	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8402	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8403	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8404	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8405	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8406	CORE	DLP2ADN900HL4L	1	230990R2	
L8407	CORE	DLP2ADN900HL4L	1	230990R2	
L8501	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8502	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8504	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8505	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8506	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8507	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8508	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8509	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8517	EMIFIL	BK1608LL241-T	1	230959R1	
L8591	CHOKE COIL	BLM21PG221SN1	1	230949R2	
L8592	CHOKE COIL	NCH-2541	1	231363K470	
L8701	CHOKE COIL	LBC2518T220M	1	231364M220R2	
X8501	CRYSTAL	HC-49-28.332MHz	1	3010417R2	
X8701	CERA LOCK	CSTCR5M00G53-B0	1	3010356R2	
C8326	C-CERA C	CK725F1A-105Z1	1	332181050R1	
C8327	C-CERA C	CK725F1A-105Z1	1	332181050R1	
C8328	CHIP ELECT C	CEWX16V-22M	1	356742209R2	
C8329	C-CERA C	CK725F1A-105Z1	1	332181050R1	

C8330	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8332	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8398	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8399	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8401	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8402	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8403	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8404	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8405	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8406	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8407	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8408	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8409	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8410	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8411	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8412	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8413	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8414	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8415	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8416	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8417	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8418	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8419	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8420	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8421	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8422	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8423	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8424	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8425	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8426	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8427	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8451	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8452	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8453	CHIP ELECT C	CEWX4V-220M	1	3567A2219R2
C8461	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8501	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8502	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8504	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8505	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8511	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8513	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8514	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8515	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8516	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8517	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8518	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8519	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8520	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8521	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8522	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8523	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8524	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8525	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8526	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8527	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8528	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8529	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8530	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8531	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8532	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8533	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8534	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8535	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8536	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8537	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8538	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8539	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8540	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8541	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8542	C-CERA C	CC725CH1H-070D1	1	342100702R1
C8543	C-CERA C	CC725CH1H-070D1	1	342100702R1
C8544	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8545	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8546	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8547	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8548	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8549	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8550	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8551	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8552	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8553	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8554	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8555	C-CERA C	CC725CH1H-102J1	1	342101024R1

C8556	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8558	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8559	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8560	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8561	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8562	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8581	C-CERA C	CK725F1E-104Z1	1	332161040R1
C8585	VR C	CE04W16V-470M(VR)	1	394644717S
C8586	C-CERA C	CK725F1H-223Z1	1	332152230R1
C8587	C-CERA C	CK725F1H-104Z1	1	332151040R1
C8588	VR C	CE04W16V-470M(VR)	1	394644717S
C8589	CHIP ELECT C	CEWX4V-22M	1	3567A2209R2
C8591	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8592	CHIP ELECT C	CEWX4V-100M	1	3567A1019R2
C8593	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8594	CHIP ELECT C	CEWX4V-100M	1	3567A1019R2
C8595	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8596	CHIP ELECT C	CEWX4V-100M	1	3567A1019R2
C8598	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8599	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8622	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8623	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8624	CHIP ELECT C	CEWX4V-220M	1	3567A2219R2
C8681	C-CERA C	CK725F1E-104Z1	1	332161040R1
C8698	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8699	C-CERA C	CC725CH1H-102J1	1	342101024R1
C8701	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8702	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8703	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8704	CHIP ELECT C	CEWX50V-4.7M	1	356780479R2
C8705	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8706	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8707	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8708	C-CERA C	CK725F1A-105Z1	1	332181050R1
C8709	CHIP ELECT C	CEWX4V-220M	1	3567A2219R2
C8710	C-CERA C	CK725F1A-105Z1	1	332181050R1
R8323	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8324	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8325	C-CARBON R	RN72K1J-473JE	1	435034734R1
R8333	C-CARBON R	RN72K1J-102JE	1	435031024R1
R8334	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8335	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8337	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8338	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8341	C-CARBON R	RN72K2E-100JE	1	435221004R1
R8401	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8402	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8403	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8404	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8405	C-R NET	RM7LJ220X04	1	43484722004R2
R8406	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8407	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8408	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8409	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8410	C-CARBON R	RN72K1J-561JE	1	435035614R1
R8411	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8413	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8414	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8415	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8416	C-R NET	RM7LJ220X04	1	43484722004R2
R8417	C-R NET	RM7LJ220X04	1	43484722004R2
R8418	C-R NET	RM7LJ220X04	1	43484722004R2
R8421	C-R NET	RM7LJ220X04	1	43484722004R2
R8422	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8423	C-R NET	RM7LJ220X04	1	43484722004R2
R8424	C-R NET	RM7LJ220X04	1	43484722004R2
R8425	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8426	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8427	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8452	C-CARBON R	RN72K1J-102JE	1	435031024R1
R8462	C-CARBON R	RN72K1J-273JE	1	435032734R1
R8501	C-CARBON R	RN72K1J-330JE	1	435033304R1
R8502	C-CARBON R	RN72K1J-330JE	1	435033304R1
R8503	C-CARBON R	RN72K1J-330JE	1	435033304R1
R8508	C-CARBON R	RN72K1J-330JE	1	435033304R1
R8509	C-CARBON R	RN72K1J-330JE	1	435033304R1
R8511	C-R NET	RM7LJ330X04	1	43484733004R2
R8512	C-CARBON R	RN72K1J-330JE	1	435033304R1
R8513	C-CARBON R	RN72K1J-330JE	1	435033304R1
R8514	C-CARBON R	RN72K1J-470JE	1	435034704R1
R8515	C-CARBON R	RN72K1J-105JE	1	435031054R1
R8516	C-CARBON R	RN72K1J-330JE	1	435033304R1
R8517	C-CARBON R	RN72K1J-472JE	1	435034724R1

R8518	C-CARBON R	RN72K1J-101JE	1	435031014R1
R8519	C-CARBON R	RN72K1J-101JE	1	435031014R1
R8520	C-CARBON R	RN72K1J-101JE	1	435031014R1
R8521	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8522	C-R NET	RM7LJ330X04	1	43484733004R2
R8523	C-R NET	RM7LJ330X04	1	43484733004R2
R8524	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8525	C-R NET	RM7LJ330X04	1	43484733004R2
R8526	C-R NET	RM7LJ330X04	1	43484733004R2
R8527	C-R NET	RM7LJ330X04	1	43484733004R2
R8528	C-R NET	RM7LJ330X04	1	43484733004R2
R8534	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8535	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8536	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8538	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8539	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8540	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8541	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8542	C-CARBON R	RN72K1J-332JE	1	435033324R1
R8543	C-CARBON R	RN72K1J-332JE	1	435033324R1
R8545	C-CARBON R	RN72K1J-102JE	1	435031024R1
R8546	C-CARBON R	RN72K1J-332JE	1	435033324R1
R8547	C-CARBON R	RN72K1J-332JE	1	435033324R1
R8567	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8568	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8569	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8570	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8571	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8572	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8573	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8574	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8575	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8576	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8577	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8578	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8579	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8580	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8581	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8582	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8591	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8592	C-CARBON R	RN72K1J-473JE	1	435034734R1
R8593	C-CARBON R	RN72K1J-821JE	1	435038214R1
R8633	C-CARBON R	RN72K1J-102JE	1	435031024R1
R8634	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8635	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8636	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8638	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8639	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8640	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8641	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8642	C-CARBON R	RN72K1J-332JE	1	435033324R1
R8643	C-CARBON R	RN72K1J-332JE	1	435033324R1
R8645	C-CARBON R	RN72K1J-102JE	1	435031024R1
R8646	C-CARBON R	RN72K1J-332JE	1	435033324R1
R8647	C-CARBON R	RN72K1J-332JE	1	435033324R1
R8702	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8704	C-CARBON R	RN72K1J-472JE	1	435034724R1
R8705	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8706	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8707	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8708	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8709	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8710	C-CARBON R	RN72K1J-103JE	1	435031034R1
R8711	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8712	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8713	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8714	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8715	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8716	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8717	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8718	C-CARBON R	RN72K1J-000JE	1	435030004R1
R8719	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8720	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8721	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8722	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8723	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8724	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8725	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8726	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8727	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8728	C-R NET	RM7LJ103X04	1	43484710304R2
R8729	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8730	C-CARBON R	RN72K1J-220JE	1	435032204R1

R8731	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8732	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8733	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8734	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8736	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8737	C-R NET	RM7LJ220X04	1	43484722004R2
R8738	C-CARBON R	RN72K1J-473JE	1	435034734R1
R8739	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8740	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8741	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8742	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8744	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8746	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8747	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8748	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8749	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8750	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8751	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8752	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8753	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8754	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8755	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8756	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8757	C-CARBON R	RN72K1J-104JE	1	435031044R1
R8758	C-CARBON R	RN72K1J-104JE	1	435031044R1
R8759	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8760	C-CARBON R	RN72K1J-222JE	1	435032224R1
R8761	C-CARBON R	RN72K1J-220JE	1	435032204R1
R8762	C-CARBON R	RN72K1J-220JE	1	435032204R1
P8003B	SOCKET	NSCT-18P1316	1	25051529
P8098	HOLDER	(CRAMP) UA-0 V0	1	27190608-1
P8302	SOCKET	CSS5019-0311F	1	25053198R2
P8501	SOCKET	CSS5019-0311F	1	25053198R2
P8601	SOCKET	CSS5019-0311F	1	25053198R2
P8702	PLUG	NPLG-8P660	1	25055704
JL8001B	WIRE TRAP	NPLG-4P587	1	25055625

ONKYO CORPORATION

Sales & Product Planning Div. : 2-1, Nisshin-cho, Neyagawa-shi, OSAKA 572-8540, JAPAN
Tel: 072-831-8023 Fax: 072-831-8124

ONKYO U.S.A. CORPORATION

18 Park Way, Upper Saddle River, N.J. 07458, U.S.A.
Tel: 201-785-2600 Fax: 201-785-2650 <http://www.us.onkyo.com/>

ONKYO EUROPE ELECTRONICS GmbH

Liegnitzerstrasse 6, 82194 Groebenzell, GERMANY
Tel: +49-8142-4401-0 Fax: +49-8142-4401-555 <http://www.eu.onkyo.com/>

ONKYO EUROPE UK Office

Suite 1, Gregories Court, Gregories Road, Beaconsfield, Buckinghamshire, HP9 1HQ
UNITED KINGDOM Tel: +44-(0)1494-681515 Fax: +44(0)-1494-680452

ONKYO CHINA LIMITED

Units 2102-2107, Metroplaza Tower I, 223 Hing Fong Road, Kwai Chung,
N.T., HONG KONG Tel: 852-2429-3118 Fax: 852-2428-9039
<http://www.ch.onkyo.com/>

